Wenck Associates, Inc.

March 31, 1989

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division III
1405 No. San Fernando Blvd., Suite 300
Burbank, CA 91504

Re: Bermite Division, Whittaker Corporation RCRA
Groundwater Quarterly Sampling Report No. 2

Dear Mr. Sorsher:

Attached you will find the "RCRA Groundwater Sampling-Quarterly Report No. 2" March 1989. This report has been compiled upon receipt of all analysis results from the analyzing laboratories.

As was the case with the first quarterly sampling event, the second sampling of the four (4) RCRA wells at Bermite suggests that the two RCRA units 317 and 342 have not impacted the first encountered groundwater. There is no detection of hazardous constituents and the groundwater indicator parameters do not indicate a contamination problem. The groundwater quality parameters continue to show that the groundwater is of a relatively high quality.

The third quarterly sampling event is scheduled for the week of April 17, 1989. Please let us know if you wish to again split samples with us. Please note the recommendations in the attached report concerning future sampling events. Because of the consistency of the groundwater quality parameter results to-date we recommend that these parameters no longer be analyzed on a quarterly basis.

In addition, we recommend that the TOC and TOX analysis no longer be required. The proper analysis of these parameters is tough, at best, for the laboratory and these parameters are redundant given the other analyses of the sampling program.

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

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If you have any questions regarding this report, please do not hesitate to call us at (612) 475-0858.

Sincerely,

WENCK ASSOCIATES, INC.

Christopher F. Thompson, P.E.

CFT/rel

Attachment

cc: Gordon Louttit - Whittaker
John Peloquin - Bermite
Michael Fernandez - EPA Region IX
Larry Peterson - DHS (formerly at RWQCB)

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

RCRA GROUNDWATER SAMPLING

QUARTERLY SAMPLING REPORT NO. 2

Prepared for:

Approved RCRA Closure Plan at

BERMITE DIVISION OF WHITTAKER CORPORATION
22116 West Soledad Canyon Road
Saugus, California, 91350

Prepared by:

WENCK ASSOCIATES, INC
832 Twelve Oaks Center
15500 Wayzata Boulevard
Wayzata, Minnesota 55391-1418
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MARCH 1989

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of California.

3-31-89

Norman C. Wenck, P.E. Registration No. 41317

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I. Laboratory Analytical Reports and Chromotograms

I. INTRODUCTION

The Bermite Division of Whittaker Corporation discontinued operations effective April 3, 1987. The Bermite facility (see Figure 1), at the time of closure, had 14 Resource Conservation and Recovery Act, (RCRA) units with interim status permits for operation of these units. Under RCRA, a formal closure plan is required to certify closure of the RCRA units. The closure plan had to be approved by the California Department of Health Services, (DHS) and the United States Environmental Protection Agency, (EPA). A Closure Plan was submitted for approval in August 1986 prior to and in anticipation of the facility shutdown. After receiving initial comments from DHS and EPA, a Revised RCRA Closure Plan was submitted for approval in April 1987. In anticipation of approval and to expedite the closure process, closure activities were initiated at the beginning of June 1987.

Modifications to the Revised RCRA Closure Plan were received in early September 1987 from DHS and EPA. Whittaker proposed changes to the modifications and met with DHS and EPA to discuss the modifications and changes. A closure plan was approved on September 30, 1987 although with a 30-day period in which further changes to the approved plan could be made. Meetings were held in early October and early November with DHS and EPA to discuss the plan and the changes. Final changes were agreed to by DHS, EPA and Whittaker. The final Approved Closure Plan Modifications were received from DHS and EPA on December 28, 1987.

As a requirement of the Approved RCRA Closure Plan, two of the RCRA units (317 Area and 342 Area) require a groundwater monitoring system capable of detecting and assessing the impact of the two RCRA units on the uppermost aquifer at the Bermite Facility.

A preliminary Groundwater Monitoring Plan for the 317/342 Area, originally submitted in the Revised RCRA Closure Plan in April 1987, was revised and submitted to the DHS and EPA for review and approval on October 8, 1987. This plan, titled "Revised Groundwater Monitoring Plan for the 317/342 Area," October 8, 1987, detailed the location and construction of three RCRA wells to be used for characterization of the uppermost aquifer at the Bermite facility. A number of informal discussions and meetings were held with the DHS concerning specific aspects of the construction of the RCRA wells. Subsequently, two of the three wells were completed. The location of the third well was determined by the DHS and this well was completed in the same manner as the first two RCRA wells. A documentation report, "Construction and Development of Wells for Groundwater Monitoring of the 342 and 317 Areas," February 1988, describing the installation of the wells and information gained from them concerning preliminary groundwater quality and aquifer characteristics, was submitted to DHS and EPA for review and approval in February 1988.

After review of the results of the installation of the three wells, a fourth RCRA well was proposed to the DHS and EPA in a report titled, "RCRA Groundwater Monitoring System-Proposed Final Configuration," May 1988. This fourth well was constructed similarly to the first three wells. A documentation report titled, "Construction and Development of RCRA Groundwater Monitoring Well 4 at the 342 and 317 Areas," August 1988, describing the construction of the fourth well, groundwater gradient information compiled from all four wells, and further preliminary groundwater quality data, was submitted to DHS and EPA for review and approval in August 1988.

While the groundwater monitoring system was being proposed, installed and documented in a number of reports, presented to the DHS and EPA, a sampling and analysis plan for collecting and analyzing representative groundwater samples from the

RCRA wells was concurrently prepared and sent to DHS and EPA in December 1987. This plan, titled "Proposed Interim Status Groundwater Monitoring Sampling and Analysis Program," December 1987, was reviewed and modified by DHS and EPA, in March 1988. The "Groundwater Sampling and Analysis Plan," was revised and submitted to DHS and EPA in August 1988.

This first formal sampling and analysis episode of the four RCRA wells was proposed to the DHS and EPA for the first week of October 1988 and occurred on October 3, 1988. All results were tabulated, including those analyses of groundwater samples taken from the four RCRA wells prior to October 1988 and presented in "RCRA Groundwater Sampling, Quarterly Sampling Report No. 1". The results of the first sampling event verified earlier sampling and analysis results and showed that the groundwater is free of contamination. The second quarterly sampling event occurred in January 1989.

The results of the second quarterly sampling event are presented herein, together with recommendations for the next two quarterly sampling events.

A tabulation of all reports referenced above is presented in the reference section of this report.

II. SAMPLING PREPARATION

A. Depth to Water Measurements

The depth to water in each RCRA Well was measured prior to well evacuation and sampling. These measurements were made on the afternoon of January 23, 1989. The location of each well relative to the 342 and 317 Areas is indicated on Figure 2. The depth to water was measured with a Solinist electronic water level meter. This meter has a probe which, when in contact with the groundwater, activates an audible and visual alarm. The tape of the probe is marked in feet and tenths of feet. The point on the tape which lined up with the top of the well casing was measured to the next lowest mark on the tape to measure the depth to water in each well. These depths were measured to an accuracy of one hundredth of a foot.

The water level meter probe was checked for the presence of floating or immiscible layers after the measurement in each well. No floating layers were detected.

The depth to water measurements and the resulting potentiometric elevation of the water in each well are included in Table I. These water elevations have been used in the determination of the direction of groundwater flow beneath the 342 and 317 Areas. A map of the potentiometric contours of the groundwater and the resultant flow direction is given on Figure 3. It can be seen that RCRA Well MW-4 is located hydraulically downgradient of the 317 area. This is consistent with earlier calculations of the groundwater flow direction (See "Documentation Report, Construction and Development of Wells for Groundwater Monitoring of the 342 and 317 Areas," February 1988 and "RCRA Groundwater Sampling, Quarterly Sampling Report No. 1.)

B. Well Evacuation

After depth to water measurements were obtained, the pumps of the four wells were started in order to evacuate the wells of potentially stagnant water. The evacuation flowrate, duration of pumping of each well and the number of well volumes removed from each well are tabulated in Table II. It can be seen that more than the minimum three well volumes were removed from each well prior to collection of the groundwater samples.

The evacuated water from each well was discharged to the ground surface, hydraulically downgradient from each well in accordance with the "Groundwater Sampling and Analysis Plan".

C. Well Stabilization

After initiation of well evacuation, well stabilization measurements were periodically taken to insure that representative groundwater samples would be collected.

Groundwater pH, temperature and specific conductance readings were taken prior to the sampling of each well and subsequent to the completion of sampling at each well.

These stabilization parameters are shown in Table 3. It can be seen that the wells were stable at the time that samples were collected.

III. SAMPLE COLLECTION - ANALYSIS

A. Required Groundwater Analysis

1. Indicator Parameters

As directed by the Approved RCRA Closure Plan, the groundwater contamination indicator parameters of pH, conductivity, total organic carbon (TOC), and total organic halogens (TOX) were analyzed in quadruplet from each well. This requirement is normally in force for a period of one year prior to the startup of a RCRA unit, and its usual purpose is to indicate more specific analyses that should be performed, such as for the hazardous constituents discussed below and analyzed in this sampling event. Each of the parameters were analyzed in accordance with EPA approved methodologies. The sample volume and container requirements and method analytical designations are included in Table IV. Copies of the analysis method protocols are included in Appendix B of Quarterly Report No. 1.

2. Quality Parameters

As directed by the Approved RCRA Closure Plan, monitoring to determine the quality of the groundwater at the Bermite site relative to EPA primary and secondary drinking water standards and as given in 40 CFR 265.92 (b) (1) - (3) is required. The quality parameters sampled, volume and container requirements, and the EPA-approved analysis method designations are shown in Table IV. Copies of the analysis method protocols are included in Appendix B of Quarterly Report No. 1.

3. Hazardous Constituent Parameters

As directed by the Approved RCRA Closure Plan, analysis for hazardous constituents as defined by 40 CFR 261, Appendix IX that were possibly used or created at the RCRA units was required. A list of these compounds was included in the "Groundwater Sampling and Analysis Plan". The list includes both metal and organic compounds. The specific compounds that were analyzed can be seen in both Tables IV and V. Sample volume and container requirements and the EPA approved analysis method designations are included in Table IV. Copies of the analysis method protocols are included in Appendix B of Quarterly Report No. 1.

B. Approved Analysis Methods

As indicated above, the analysis of the indicator, quality and hazardous constituent parameters was performed by EPA or other approved methodologies. Copies of the protocols are included in Appendix B of Quarterly Report No. 1.

All sample analyses were performed by EPA methods except formaldehyde, total phosphate and fluoride, which have no EPA specified methodologies and therefore were analyzed by other approved methods. These other methods are indicated in Table IV.

All of the analysis methods were specified in the "Groundwater Sampling and Analysis Plan".

C. Sample Containers

All sample containers were supplied by I-CHEM, Inc. Hayward, CA. Containers were pre-cleaned and sealed at the I-CHEM facilities and are statistically certified as clean and free of volatile organic and metal compounds. The Certificates of Analysis of all containers used in this sampling event are included as Appendix C. In the event of analysis inconsistencies, the containers can be cross-checked with the sample container Certificate of Analysis.

D. Sample Labeling

All sample containers were labeled at the time of sample collection in accordance with the "Groundwater Sampling and Analysis Plan". A unique sample identification system was used to ensure that samples were clearly and properly labeled. The key to the labeling scheme for each analysis and each container is included in Table VI.

E. Sample Collection

1. Sampling Volumetric Flowrate

After removal of sufficient water from each well to ensure representative groundwater, the groundwater samples were collected. The flowrate of wells MW-1, MW-2, and MW-3 could not be varied. However, to ensure a maximum flowrate into the sample containers no greater than 100 milliliters/minute and to minimize aeration and agitation of the collected samples, a teflon sampling valve and stem was installed into the invert of the well discharge pipe. The sampling flowrate was adjusted to a rate of approximately 100 milliliters/minute and water from this valve and stem was directed into the sample containers. The pumping rate of well MW-4 was adjusted to a

flowrate of 100 milliliters/minute for the collection of the samples. In addition, a teflon valve and stem was also installed at the discharge of this well. This low pumping rate was pumped for 25 hours, a time sufficient to ensure that the water located at the pump when the flowrate was changed was discharged from the well prior to sampling.

2. Order of Sample Collection

The order in which samples were collected is given in Table VII. This same order of sample collection was used for each of the four RCRA monitoring wells.

3. Field Sample Preservation

The groundwater samples which were collected for metal analyses (total and dissolved) were pH adjusted in the field to a pH = 2. This was accomplished with the addition of a 50% nitric acid solution to the sample containers. The pH of each sample was monitored with an electronic pH meter. The acid was added to the sample container with a small pipette and was periodically checked with the pH meter. Acid was added until the desired pH was achieved.

The samples collected for dissolved metal analyses were filtered through a 0.45 micron filter prior to pH adjustment.

All samples, upon collection, labeling and sealing were placed into coolers containing ice. The samples collected on the first day of sampling were transferred to coolers at the analyzing laboratory at the end of the first day. The remaining samples were collected during the second day and were then delivered to the laboratory on that day.

4. Field and Trip Sample Blanks

Sample blanks were made up at the laboratory prior to the sampling event and in the field during the sampling event. A field and trip blank for each type of sample bottle for organic analysis was made up in accordance with the "Groundwater Sampling and Analysis Plan".

The trip blank was made up at the laboratory, transferred to the site in coolers, kept in a refrigerator overnight, transferred to each sampling site and kept in the coolers with the collected samples until delivery to the laboratory.

The field blanks were made up in the field with water delivered to the field along with the trip blanks. These blanks were then placed into the coolers with the collected samples until delivery to the laboratory.

IV. FIELD QA/QC

A. Decontamination of Field Test Equipment

The equipment used in the field during sample collection that came into contact with the wells or the collected samples was decontaminated to ensure that cross-contamination of samples was minimized. The mercury thermometer, pH probe, nitric acid eyedropper, water filter apparatus, specific conductance probe and water level meter probe were all cleaned in accordance with the "Groundwater Sampling and Analysis Plan" before and after each use.

Clean sampling gloves were worn by all sample personnel who handled the samples prior to sealing the sample containers with the chain-of-custody seals.

B. Field Log

A log was kept of all field activities and observations during this sampling and analysis event. This log was kept in accordance with the "Groundwater Sampling and Analysis Plan". A copy of this log is included as Appendix D.

C. Sample Container Labeling and Seals

As indicated above, all containers were labeled in the field as each sample was collected. A unique sample identification number was given to each separate sample. The sample containers were sealed with chain-of-custody seals (evidence tape) after labeling. The sample containers were then placed into coolers with ice. The coolers were also sealed with chain-of-custody seals for delivery to the laboratory.

D. Chain-of-Custody and Sample Analysis Request Forms

Chain-of-custody documentation was completed for all samples. These forms were filled out at the time of sample collection and were kept with the samples until delivery to the laboratory. Copies of the signed chain-of-custody forms are included as Appendix E. Sample analyses request forms indicating to the laboratory the desired analysis to be run on each sample were also completed at the time of sample collection. These forms were kept with the samples until delivery to the laboratory. Copies of these forms are included as Appendix F.

E. Delivery of Samples to Laboratory

Upon completion of the collection of all samples and the completion of all chain-of-custody and sample analysis request forms, the samples were delivered to FGL Environmental laboratories in Santa Paula, CA. Maximum-minimum thermometers had been placed in the coolers along with the samples for verification of the temperature of the samples. Upon delivery to the laboratory temperatures recorded by the maximum-minimum thermometers were logged on the sample analysis request forms. The temperature recorded in each of the five coolers used was less than 1° C.

As indicated above, the samples and associated Chain-of-Custody documentation were delivered to FGL on two separate days as a result of the sampling event requiring two days.

F. Security

Security measures were taken to ensure that no person had the opportunity to tamper with the wells before, during and after sampling of the groundwater or with the collected groundwater samples. The wells have locking caps which prevents access to the wells. The Bermite facility has a locked gate which is manned 24 hours per day. In addition, Bermite personnel personally delivered the samples to FGL.

V. LABORATORY QA/QC

All groundwater samples collected were analyzed by FGL Environmental, Santa Paula, California. FGL Environmental is certified by the California Department of Health Service to perform the analyses required of the groundwater samples. FGL utilized Brown and Caldwell for some of the analysis. Brown and Caldwell is also certified by the California Department of Health Services.

A detailed description of the FGL Environmental QA/QC program can be found in Appendix G. In addition, copies of the original laboratory analytical reports and chromatograms of all blank, duplicate and spiked samples performed as a part of the QA/QC program are included as Appendix H.

VI. SAMPLE ANALYTICAL RESULTS

A. Indicator Parameters

The indicator parameters included pH, conductance, total organic carbon (TOC) and total organic halogen (TOX) measurements. Four replicates from each well were analyzed. The results for the first quarterly sampling event are presented in Table VIII.

As can be seen from the table, pH values for all four monitoring wells were within the range of 7.0 - 7.9 pH units. These laboratory results correspond well with the field pH readings (see Table III). The conductance values of the groundwater were similar in wells MW-1, MW-3 and MW-4. The values of conductance in MW-2 were higher than in the other wells, and this was also observed in the field during well stabilization readings and was observed in the first sampling event.

TOC values for monitoring wells MW-3 and MW-4 were less than 3 mg/l, the detection limit. Monitoring wells MW-1 and MW-2 each had on replicate TOC value above the detection limit. The two replicate concentrations were 4 mg/l and 5 mg/l corresponding to wells MW-1 and MW-2, respectively. These low values are most likely an indication of naturally occurring organic compounds in the vicinity of wells MW-1 and MW-2. This is based on the absence of organic compounds specifically analyzed and non-detected as discussed below.

TOX values were not detectable for monitoring wells MW-1, MW-3, and MW-4. The results for MW-2 were detectable, but may be due to difficulties incurred in the laboratory, as noted on Table VIII.

Copies of original laboratory analytical reports for the indicator parameters can be found in Appendix I.

B. Groundwater Quality Parameters

1. Total and Dissolved Metals

The groundwater samples were analyzed for RCRA metals, both dissolved and total. Tables IX and X list dissolved and total metal values respectively for all four monitoring wells.

Metals were not detected at or above the detection limits, with the exception of barium in monitoring well MW-2 and chromium in MW-4. The concentration of total and dissolved barium in MW-2 both were 600 ug/l. This concentration of 600 ug/l is the same as that determined in this well previously. The value of 600 ug/l is significantly less than the Maximum Contaminant Level (MCL) value of 1,000 ug/l for barium in drinking water set by U.S. Environmental Protection Agency (EPA) Office of Drinking Water. The concentration of total chromium in MW-4 was 19 ug/l, while no dissolved chromium was detected in this well. The value of 19 ug/l is less than the MCL value of 50 mg/l for chromium in drinking water.

Copies of original laboratory analytical reports can be found in Appendix I.

2. Chlorinated Pesticides and Herbicides

Chlorinated pesticides and herbicides for which the samples were analyzed included Endrin, Lindane, methoxychlor, toxaphene, 2,4-D and 2,4,5-TP. None of these

compounds was present in any of the four monitoring wells. Table XI lists US EPA MCL values for these compounds together with the detection limits.

Copies of original laboratory analytical reports can be found in Appendix I.

3. Radioactivity

Total radium (radium 226 and 228) was not detected at 1 picoCurie/l, while its MCL value is 5 picoCurie/l. The MCL values for gross alpha and gross beta are 15 picoCurie/l. All four monitoring wells had gross alpha and gross beta values that were less than 1 picoCurie/l. Table XI lists these radioactivity parameters together with their MCL values.

Copies of original laboratory analytical reports can be found in Appendix I.

4. Bacteria

All groundwater samples were analyzed for the presence of bacteria. No coliform bacteria were found in any of the four monitoring wells. These results are presented in Table XI and copies of the original laboratory analytical reports can be found in Appendix I.

5. Nutrients

The nutrients for which the samples were analyzed in this study included nitrate, sulfate, sodium, iron, manganese, total phosphate and fluoride. None of the components present in groundwater had values exceeding MCL levels. Table XI lists

sample values together with the drinking water MCL values for these components. Copies of the original laboratory analytical reports are presented in Appendix I.

6. Phenols

Table XII lists all the phenol compounds for which groundwater samples were analyzed. None of the compounds was detected at the instrument detection limit. Except for pentachlorophenol, no compound has a set Maximum Contaminant Level. The MCL value for pentachlorophenol is 220 ug/l, while the detection limit is 10 ug/l.

Copies of the original laboratory analytical reports can be found in Appendix I.

C. Hazardous Constituents

1. Formaldehyde

Groundwater samples were analyzed for formaldehyde. Table XIII presents the results of the formaldehyde analyses. Values for all four monitoring wells were non-detectable.

Copies of the original laboratory analytical reports can be found in Appendix I.

2. Total and Dissolved Metals

In addition to the eight RCRA metals discussed above, three additional metals were analyzed (antimony, copper and thallium). Groundwater analyses did not show these metals present at or above the detection limit. Table XIII lists these parameters together with their MCL values, where applicable.

Copies of the original laboratory reports can be found in Appendix I.

3. Volatile and Semi-Volatile Organics

Volatile and semi-volatile organic compounds were analyzed by EPA methods 624 and 625. The analyses do not show any identified or tentatively identified compounds. Table XIV and XV present all parameters together with the detection limits for the particular compounds.

Copies of the original laboratory analytical reports and chromatograms are included in Appendix I.

VII. SUMMARY

A. Indicator Parameters

The indicator parameters do not show evidence of groundwater contamination. The pH and conductance values for all four monitoring wells are within the range for clean drinking water. Where present at all, the TOC and TOX values are, just above the detection limit for each of these parameters. The absence of specific organic compounds correlates with these results.

B. Groundwater Quality Parameters

The groundwater quality parameters showed groundwater to be free of contamination from the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver), pesticides and herbicides, coliform bacteria and phenols. The analyses were all within the EPA primary and secondary drinking water standards.

The nutrients analyzed all were within applicable drinking water standards. The concentrations detected were very nearly the same as the concentrations detected during the first quarterly sample event.

C. Hazardous Constituent Parameters

The results of this sampling event do not indicate groundwater contamination by any of the hazardous constituents. The volatile and semi-volatile organic compound analyses do not show any of the compounds to be present. There was no indication of analyzed metals or formaldehyde in the four monitoring wells.

The concentration of barium, while non-detectable in wells MW-1, MW-3, and MW-4, continues to be detectable at the same concentration both in the dissolved and total samples and at the same concentration of earlier samples. The chromium in well MW-4 was detectable in the total sample and not detectable in the dissolved sample. This result is contrary to the results of the first sample event.

VIII. RECOMMENDATIONS FOR FUTURE SAMPLING EVENTS

The objective of the groundwater sampling was to verify that the groundwater is free of contamination. The results of the second quarterly sample event, like those of the first quarterly sample event, clearly demonstrate that the groundwater has not been impacted by the activities of the 317 and 342 areas.

It is recommended that the analyses for TOC and TOX be eliminated from the list of parameters for future sampling events. TOC and TOX do not necessarily provide reliable analytical results regarding the presence of hazardous constituents, and specific organic compounds are being analyzed in the groundwater that make the TOC and TOX analyses redundant.

In accordance with the "Groundwater Sampling and Analysis Plan", it is recommended that all of the groundwater quality parameters be eliminated from future sampling events. Most of the parameters have been shown to be not present in the groundwater or, when present, are below EPA drinking water standards.

It is recommended that the groundwater be sampled for two more quarters. The next sampling event is scheduled for the week of April 17, 1989. The samples will be field analyzed for temperature, pH and conductance. The collected samples will be analyzed for volatile organic compounds by EPA Method 624, semi-volatile organic compounds by EPA Method 625 and analyzed for the eight RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver. This recommended sampling and analysis protocol will allow further assessment of the possible impact of the 342 and 317 Areas on the groundwater at the Bermite facility.

IX. REFERENCES

The following documents have been submitted to the California Department of Health Services (DHS) and the Region IX Environmental Protection Agency (EPA) in fulfillment of the RCRA Closure Plan regarding groundwater monitoring at the 342 and 317 areas:

- Revised RCRA Closure Plan, April, 1987
- Revised Groundwater Monitoring Plan for the 317/342 Area, October 8, 1987
- Proposed Interim Status Groundwater Monitoring Sampling and Analysis Program, December, 1987
- Documentation Report - Construction and Development of Wells for Groundwater Monitoring of the 342 and 317 Areas, February, 1988
- RCRA Groundwater Monitoring System - Proposed Final Configuration, May, 1988
- Documentation Report - Construction and Development of RCRA Groundwater Monitoring Well 4, August, 1988
- "Groundwater Sampling and Analysis Plan", August, 1988
- RCRA Groundwater Sampling, Quarterly Sampling Report No. 1, December 1988

In addition the following document submitted to the DHS and EPA in fulfillment of the RCRA Closure Plan, regarding soil sampling of the near surface soils at the 342 and 317 areas, has been referenced herein:

- Verification Sampling Results at Selected RCRA Units, March, 1988

TABLES

TABLE I

DEPTH TO WATER MEASUREMENTS
January 23, 1989

Well	Top of Casing Elevation (NGVD)	Depth to Water (feet)	Potentiometric Surface Elevation (NGVG)
MW-1	1561.07	461.25	1099.82
MW-2	1424.04	327.66	1096.38
MW-3	1538.07	437.82	1100.25
MW-4	1537.92	439.00	1098.92

TABLE II

WELL EVACUATION AND SAMPLING FLOWRATES

Well	Time and Date Pump Started	Evacuation Flowrate (ml/min)	Time and Date of Sample Collection	Sampling Flowrate (ml/min)	Well Volumes Removed Prior to Sampling
MW-1	1542 (1/23/89)	37,850	0930 (1/25/89)	100	193
MW-2	0815 (1/24/89)	56,775	1400 (1/24/89)	100	54
MW-3	1600 (1/23/89)	18,925	0750 (1/25/89)	100	70
MW-4	1535 (1/23/89)	5,678	1110 (1/25/89)	100	10*

*includes 25 hour period of sampling flowrate and 18.0 hours of evacuation flowrate

TABLE III

WELL STABILIZATION TESTS

Well	T(°C)	pH	Specific Conductivity Units (umhos)	Time
MW-1	21.5	7.05	440	0930 (1/24/89)
	23.0	7.15	465	1037 (1/24/89)
	22.0	7.05	450	1225 (1/24/89)
	22.0	7.05	440	1524 (1/24/89)
	22.0	7.10	430	0710 (1/25/89)
	22.0	7.05	440	0845 (1/25/89)
	22.0	7.10	460	0915 (1/25/89)
	22.0	7.10	460	1035 (1/25/89)
MW-2	22.0	6.65	3320	0955 (1/24/89)
	22.0	6.70	3310	1055 (1/24/89)
	21.5	6.80	3350	1245 (1/24/89)
	21.5	6.75	3320	1350 (1/24/89)
	21.5	6.75	3300	1445 (1/24/89)
	21.0	6.65	3200	0730 (1/25/89)
MW-3	22.0	7.10	570	0945 (1/24/89)
	22.0	7.05	570	1050 (1/24/89)
	22.0	7.15	570	1235 (1/24/89)
	22.0	NR	570	1528 (1/24/89)
	22.0	7.15	540	0720 (1/25/89)
	22.0	7.15	540	0835 (1/25/89)
MW-4	21.0	6.75	480	0920 (1/24/89)
	22.0	7.40	460	1030 (1/24/89)
	22.0	7.45	460	1220 (1/24/89)
	22.0	7.15	460	1518 (1/25/89)
	20.0	7.40	425	0700 (1/25/89)
	20.0	7.40	460	1100 (1/25/89)
	20.5	7.35	460	1215 (1/25/89)

TABLE IV

SCHEDULE OF PARAMETER ANALYSIS, ANALYSIS METHODS, AND SAMPLE CONTAINER REQUIREMENTS (per well)

Indicator Parameters

Four replicates for each parameter collected and analyzed per well.

Parameter	Analysis Method	Amount of Sample Collected	Type of Container
pH Specific Conductance	EPA 9040 EPA 9050	4 x 500 ml	Plastic
Total Organic Carbon	EPA 9060	4 x 250 ml	Amber glass, TFE-lined cap
Total Organic Halogen	EPA 9020	4 x 250 ml	Amber glass, TFE-lined cap

Groundwater Quality Parameters

Analyze one sample per well.

Parameter	Analysis Method	Amount of Sample Required	Type of Container
Endrin Lindane Methoxychlor Toxaphene	EPA 8080	3 x 1000 ml	Amber glass, TFE-lined cap
2,4-D 2,4,5,-TP Silver	EPA 8150		

TABLE IV (continued)

Parameter	Analysis Method	Amount of Sample Required	Type of Container
Radium Gross Alpha Gross Beta	EPA 9315 EPA 9310	1 x 1000 ml	Plastic
Coliform Bacteria	EPA 9131	1 x 500 ml	Whirlpak
Phenols	EPA 8040	1 x 1000 ml	Amber glass, TFE-lined cap
Nitrate	EPA 9200		
Sulfate	EPA 9035		
Sodium	EPA 7770	1 x 1000 ml	Plastic
Iron	EPA 7380		
Manganese	EPA 7460		
Total Phosphate	Std. Method 424F	1 x 500 ml	Plastic
Dissolved and Total Metals			
	EPA 7060		
Arsenic	EPA 7080		
Barium	EPA 7130		
Cadmium	EPA 7190	2 x 1000 ml	Plastic
Chromium	EPA 7420		
Lead	EPA 7470		
Mercury	EPA 7740		
Selenium Silver	EPA 7760	2 x 250 ml	Amber glass, TFE-lined cap
Fluoride	Std. Method 413B	500 ml	Plastic

TABLE IV (continued)

Hazardous Constituents

Analyze one sample per well.

Parameter	Analysis Methods	Amount of Sample Required	Type of Container
Volatile organics	EPA 8240	3 x 40 ml	Amber glass TFE-lined cap
Semi-volatile organics	EPA 8270	3 x 1000 ml	Amber glass, TFE-lined cap
Formaldehyde	NIOSH 3500	1 x 500 ml	Plastic
Antimony	EPA 7040		
Copper	EPA 7210	See above for metals	
Thallium	EPA 7840		

NOTE: See Table V for specific volatile and semi-volatile compounds required for analysis. All compounds identified will be reported.

TABLE V

LIST OF VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS

Compound	Method of Analysis
Benzene	EPA 8240
Butyl Acetate	EPA 8240
Carbon Disulfide	EPA 8240
Chloroform	EPA 8240
Dichloromethane	EPA 8240
Methyl Methacrylate	EPA 8240
Tetrachloroethene	EPA 8240
Trichloroethene	EPA 8240
Methylene Chloride	EPA 8240
1,1,1-Trichloroethane	EPA 8240
Methyl Ethyl Ketone	EPA 8240
Acetone	EPA 8240
Toluene	EPA 8240
Total Xylenes	EPA 8240
Ethyl Benzene	EPA 8240
Styrene	EPA 8240
Decane	EPA 8240
Undecane	EPA 8240
Nitrobenzene	EPA 8270
N-Nitrosodiphenylamine	EPA 8270
Hexachloroethane	EPA 8270
Naphthalene	EPA 8270

TABLE VI

KEY TO ANALYSIS DESIGNATION LABELS ON SAMPLE CONTAINERS

Analysis Designation	Parameter(s) to be Analyzed
A	pH Specific Conductance (temperature corrected)
B	Total Organic Carbon (TOC)
C	Total Organic Halogen (TOX)
D	Endrin, Lindane Methoxychlor, Toxaphene 2,4-D and 2,4,5 - TP
E	Radium, Gross Alpha, Gross Beta
F	Coliform Bacteria
G	Phenols
H	Nitrate, Sulfate, Sodium, Iron Manganese
I	Total Phosphate
J	Total Metals Ar, Ba, Cd, Cr, Pb, Hg, Se, Cu, Sb, Tl
K	Dissolved Metals Ar, Ba, Cd, Cr, Pb, Hg, Se, Cu, Sb, Tl
L	Silver (total)
M	Silver (dissolved)
N	Fluoride
O	Volatile organics
P	Semi-volatile organics
Q	Formaldehyde

TABLE VI (continued)

Each sample container will be labeled with a unique sample number. The form of each label is as follows:

Well I.D./Analysis Designation/Sample Event No./Replicate No.

Where:

Well I.D. = MW1, MW2, MW3 or MW4

Analysis Designation = A through Q according to Table attached

Sample Event No. = 1 through 4

Replicate No. = 1 through 4

NOTE: No Replicate No. indicates replicate samples are not required

TABLE VII

ORDER OF SAMPLING

1. Volatile Organics
2. Semi-Volatile Organics
3. Total Organic Halogen (TOX)
4. Total Organic Carbon (TOC)
5. Phenols
6. Endrin, Lindane, Metoxychlor, Toxaphene, 2,4-D, 2,4,5-TP
7. pH, Specific Conductance
8. Radium, Gross Alpha, Gross Beta
9. Coliform Bacteria
10. Total Metals
11. Silver (Total)
12. Dissolved Metals
13. Silver (Dissolved)
14. Nitrate, Sulfate, Sodium, Iron, Manganese
15. Fluoride
16. Total Phosphate
17. Formaldehyde

TABLE VIII

INDICATOR PARAMETERS

WELL	DATE	SAMPLE EVENT	REPLICATE	pH	CONDUCTANCE (umhos)	TOC (mg/l)	TOX (ug/l)
MW-1	25-Jan-89	2	1	7.4	576	<3	<100
			2	7.5	567	5	<100
			3	7.5	585	<3	<100
			4	7.5	559	<3	<100
MW-2	25-Jan-89	2	1	7.0	3897	<3	120(1)
			2	7.0	3897	4	110(1)
			3	7.0	3897	<3	130(1)
			4	7.0	3852	<3	120(1)
MW-3	25-Jan-89	2	1	7.6	669	<3	<100
			2	7.6	681	<3	<100
			3	7.9	624	<3	<100
			4	7.8	681	<3	<100
MW-4	25-Jan-89	2	1	7.5	520	<3	<100
			2	7.6	513	<3	<100
			3	7.5	520	<3	<100
			4	7.6	527	<3	<100

NOTE:
(1) - BREAKTHROUGH OF SAMPLE INTO BACKUP COLUMN DURING ISOLATION WITH ACTIVATED CARBON. RESULT MAY NOT BE RELIABLE.
< = LESS THAN THE DETECTION LIMIT

TABLE IX

GROUNDWATER QUALITY PARAMETERS
DISSOLVED METALS

WELL	DATE	SAMPLE EVENT	ARSENIC (ug/l)	BARIUM (ug/l)	CADMIUM (ug/l)	CHROMIUM (ug/l)	LEAD (ug/l)	MERCURY (ug/l)	SELENIUM (ug/l)	SILVER (ug/l)
MCL			50	1000	10	50	50	2	10	50
MW-1	25-Jan-89	2	<10	<100	<1	<10	<10	<1	<5	<10
MW-2	25-Jan-89	2	<10	600	<1	<10	<10	<1	<5	<10
MW-3	25-Jan-89	2	<10	<100	<1	<10	<10	<1	<5	<10
MW-4	25-Jan-89	2	<10	<100	<1	<10	<10	<1	<5	<10

NOTE:
MCL = MAXIMUM CONTAMINANT LEVEL
< = LESS THAN THE DETECTION LIMIT

TABLE X

GROUNDWATER QUALITY PARAMETERS
TOTAL METALS

WELL	DATE	SAMPLE EVENT	ARSENIC (ug/l)	BARIUM (ug/l)	CADMIUM (ug/l)	CHROMIUM (ug/l)	LEAD (ug/l)	MERCURY (ug/l)	SELENIUM (ug/l)	SILVER (ug/l)
MCL			50	1000	10	50	50	2	10	50
MW-1	25-Jan-89	2	<10	<100	<1	<10	<10	<1	<5	<10
MW-2	25-Jan-89	2	<10	600	<1	<10	<10	<1	<5	<10
MW-3	25-Jan-89	2	<10	<100	<1	<10	<10	<1	<5	<10
MW-4	25-Jan-89	2	<10	<100	<1	19	<10	<1	<5	<10

NOTE:
MCL = MAXIMUM CONTAMINANT LEVEL
< = LESS THAN THE DETECTION LIMIT

TABLE XI

GROUNDWATER QUALITY PARAMETERS

	WELL	DATE	SAMPLE EVENT	ENDRIN (ug/l)	LINDANE (ug/l)	METHOXY-CHLOR (ug/l)	TOXAPHENE (ug/l)	2,4-D (ug/l)	2,4,5-TP (ug/l)	TOTAL RADIUM (pCi/L)	GROSS ALPHA (pCi/L)	GROSS BETA (pCi/L)
MCL				0.2	4	100	5	100	10	5	15	15
	MW-1	25-Jan-89	2	<0.01	<0.4	<10	<0.5	<10	<1	<1	3	0.7
	MW-2	25-Jan-89	2	<0.01	<0.4	<10	<0.5	<10	<1	<1	4	4
	MW-3	25-Jan-89	2	<0.01	<0.4	<10	<0.5	<10	<1	<1	2	2
	MW-4	25-Jan-89	2	<0.01	<0.4	<10	<0.5	<10	<1	<1	0	0

NOTE:
MCL=MAXIMUM CONTAMINANT LEVEL
N.A.=NOT APPLICABLE
<=LESS THAN THE DETECTION LIMIT

TABLE XI (CONT'D.)

GROUNDWATER QUALITY PARAMETERS

WELL	DATE	SAMPLE EVENT	COLIFORM BACTERIA (MPN/100mL)	NO3- (mg/L)	SO4- (mg/L)	Na+ (mg/L)	Fe (ug/L)	MANGANESE (ug/L)	TOTAL PHOSPHATE (mg/L)	FLUORIDE (mg/L)
MCL			2.2	10	250	N.A.	300	50	N.A.	4
MW-1	25-Jan-89	2	<2.2	3	22	43	<100	<30	<0.1	0.3
MW-2	25-Jan-89	2	<2.2	2	17	82	<100	<30	<0.1	0.2
MW-3	25-Jan-89	2	<2.2	2	74	53	<100	<30	<0.1	0.3
MW-4	25-Jan-89	2	<2.2	1	43	63	<100	<30	<0.1	0.3

NOTE:
MCL=MAXIMUM CONTAMINANT LEVEL
N.A.=NOT APPLICABLE
<=LESS THAN THE DETECTION LIMIT

TABLE XII

GROUNDWATER QUALITY PARAMETERS
PHENOLS

WELL	DATE	SAMPLE EVENT	2,4-DI-CHLORO-PHENOL (ug/l)	2,4-DI-METHYL-PHENOL (ug/l)	2,4-DI-NITRO-PHENOL (ug/l)	2-CHLORO-PHENOL (ug/l)	4-CHLORO-3-METHYL-PHENOL (ug/l)	2-METHYL-PHENOL (ug/l)	4-METHYL-PHENOL (ug/l)
PROPOSED MCLG			N.S.L.	N.S.L.	N.S.L.	N.S.L.	N.S.L.	N.S.L.	N.S.L.
MW-1	25-Jan-89	2	<10	<10	<25	<10	<10	<10	<10
MW-2	25-Jan-89	2	<10	<10	<25	<10	<10	<10	<10
MW-3	25-Jan-89	2	<10	<10	<25	<10	<10	<10	<10
MW-4	25-Jan-89	2	<10	<10	<25	<10	<10	<10	<10

NOTE:
MCLG = MAXIMUM CONTAMINANT LEVEL GOAL
N.S.L.=NO SET LEVEL
< = LESS THAN THE DETECTION LIMIT

TABLE XII (CONT'D.)

GROUNDWATER QUALITY PARAMETERS
PHENOLS

WELL	DATE	SAMPLE EVENT	2-METHYL-4,6-DINITRO-PHENOL (ug/l)	2-NITRO-PHENOL (ug/l)	4-NITRO-PHENOL (ug/l)	PENTA-CHLORO-PHENOL (ug/l)	PHENOL (ug/l)	2,4,5-TRI-CHLORO-PHENOL (ug/l)	2,4,6-TRI-CHLORO-PHENOL (ug/l)
PROPOSED MCLG			N.S.L.	N.S.L.	N.S.L.	220	N.S.L.	N.S.L.	N.S.L.
MW-1	25-Jan-89	2	<50	<10	<25	<10	<10	<10	<10
MW-2	25-Jan-89	2	<50	<10	<25	<10	<10	<10	<10
MW-3	25-Jan-89	2	<50	<10	<25	<10	<10	<10	<10
MW-4	25-Jan-89	2	<50	<10	<25	<10	<10	<10	<10

NOTE:
MCLG = MAXIMUM CONTAMINANT LEVEL GOAL
N.S.L.=NO SET LEVEL
< = LESS THAN THE DETECTION LIMIT

TABLE XIII

HAZARDOUS CONSTITUENTS

	WELL	DATE	SAMPLE EVENT	FORMALDEHYDE (ug/l)	DISSOLVED ANTIMONY (ug/l)	DISSOLVED COPPER (ug/l)	DISSOLVED THALLIUM (ug/l)	TOTAL ANTIMONY (ug/l)	TOTAL COPPER (ug/l)	TOTAL THALLIUM (ug/l)
PROPOSED MCLG				N.S.L.	N.S.L.	1300	N.S.L.	N.S.L.	1300	N.S.L.
	MW-1	25-Jan-89	2	<100	<100	<50	<100	<100	<50	<100
	MW-2	25-Jan-89	2	<100	<100	<50	<100	<100	<50	<100
	MW-3	25-Jan-89	2	<100	<100	<50	<100	<100	<50	<100
	MW-4	25-Jan-89	2	<100	<100	<50	<100	<100	<50	<100

NOTE:
MCLG = MAXIMUM CONTAMINANT LEVEL GOAL
N.S.L.=NO SET LEVEL
< = LESS THAN THE DETECTION LIMIT

TABLE XIV

HAZARDOUS CONSTITUENTS
VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	ACETONE (ug/l)	BENZENE (ug/l)	BROMO-DICHLORO-METHANE (ug/l)	BROMOFORM (ug/l)	BROMO-METHANE (ug/l)	CARBON TETRA-CHLORIDE (ug/l)	CHLORO-BENZENE (ug/l)
SNARL			700	70	100	100	N.S.L.	20	N.S.L.
MW-1	25-Jan-89	2	<50	<5	<5	<5	<10	<5	<5
MW-2	25-Jan-89	2	<50	<5	<5	<5	<10	<5	<5
MW-3	25-Jan-89	2	<50	<5	<5	<5	<10	<5	<5
MW-4	25-Jan-89	2	<50	<5	<5	<5	<10	<5	<5

NOTE:
SNARL = SUGGESTED NO-ADVERSE-RESPONSE LEVEL
N.S.L.= NO SET LEVEL
<= LESS THAN THE DETECTION LIMIT

TABLE XIV (CONT'D.)

HAZARDOUS CONSTITUENTS
VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	CHLORO-ETHANE (ug/l)	CHLOROFORM (ug/l)	CHLORO-METHANE (ug/l)	DIBROMO-CHLORO-METHANE (ug/l)	1,2-DICHLORO-BENZENE (ug/l)	1,3-DICHLORO-BENZENE (ug/l)
SNARL			N.S.L.	100	N.S.L.	100	130	130
MW-1	25-Jan-89	2	<10	<5	<10	<5	<5	<5
MW-2	25-Jan-89	2	<10	<5	<10	<5	<5	<5
MW-3	25-Jan-89	2	<10	<5	<10	<5	<5	<5
MW-4	25-Jan-89	2	<10	<5	<10	<5	<5	<5

NOTE:
SNARL = SUGGESTED NO-ADVERSE-RESPONSE LEVEL
N.S.L.= NO SET LEVEL
<= LESS THAN THE DETECTION LIMIT

TABLE XIV (CONT'D.)

HAZARDOUS CONSTITUENTS
VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	1,4-DICHLORO-BENZENE (ug/l)	1,1-DICHLORO-ETHANE (ug/l)	1,2-DICHLORO-ETHANE (ug/l)	1,1-DICHLORO-ETHENE (ug/l)
SNARL			130	N.S.L.	5	70
MW-1	25-Jan-89	2	<5	<5	<5	<5
MW-2	25-Jan-89	2	<5	<5	<5	<5
MW-3	25-Jan-89	2	<5	<5	<5	<5
MW-4	25-Jan-89	2	<5	<5	<5	<5

NOTE:
SNARL = SUGGESTED NO-ADVERSE-RESPONSE LEVEL
N.S.L.= NO SET LEVEL
<= LESS THAN THE DETECTION LIMIT

TABLE XIV (CONT'D.)

HAZARDOUS CONSTITUENTS
VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	trans-1,2-DICHLORO-ETHENE (ug/l)	1,2-DICHLORO-PROPANE (ug/l)	cis-1,3-DICHLORO-PROPENE (ug/l)	trans-1,3-DICHLORO-PROPENE (ug/l)	ETHYL BENZENE (ug/l)
SNARL			270	10	N.S.L.	N.S.L.	N.S.L.
MW-1	25-Jan-89	2	<5	<5	<5	<5	<5
MW-2	25-Jan-89	2	<5	<5	<5	<5	<5
MW-3	25-Jan-89	2	<5	<5	<5	<5	<5
MW-4	25-Jan-89	2	<5	<5	<5	<5	<5

NOTE:
SNARL = SUGGESTED NO-ADVERSE-RESPONSE LEVEL
N.S.L.= NO SET LEVEL
<= LESS THAN THE DETECTION LIMIT

TABLE XIV (CONT'D.)

HAZARDOUS CONSTITUENTS
VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	METHYL ETHYL KETONE (ug/l)	METHYLENE CHLORIDE (ug/l)	1,1,2,2-TETRACHLORO-ETHANE (ug/l)	TETRACHLORO-ETHENE (ug/l)	TOLUENE (ug/l)	1,1,1-TRICHLORO-ETHANE (ug/l)
SNARL			750	150	N.S.L.	20	340	200
MW-1	25-Jan-89	2	<50	<5	<5	<5	<5	<5
MW-2	25-Jan-89	2	<50	<5	<5	<5	<5	<5
MW-3	25-Jan-89	2	<50	<5	<5	<5	<5	<5
MW-4	25-Jan-89	2	<50	<5	<5	<5	<5	<5

NOTE:
SNARL = SUGGESTED NO-ADVERSE-RESPONSE LEVEL
N.S.L.= NO SET LEVEL
<= LESS THAN THE DETECTION LIMIT

TABLE XIV (CONT'D.)

HAZARDOUS CONSTITUENTS
VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	1,1,2-TRICHLORO-ETHANE (ug/l)	TRICHLORO-ETHENE (ug/l)	TRICHLORO-FLUORO-METHANE (ug/l)	VINYL CHLORIDE (ug/l)	XYLENES (ug/l)
SNARL			N.S.L.	75	N.S.L.	2	420
MW-1	25-Jan-89	2	<5	<5	<5	<10	<5
MW-2	25-Jan-89	2	<5	<5	<5	<10	<5
MW-3	25-Jan-89	2	<5	<5	<5	<10	<5
MW-4	25-Jan-89	2	<5	<5	<5	<10	<5

NOTE:
SNARL = SUGGESTED NO-ADVERSE-RESPONSE LEVEL
N.S.L.= NO SET LEVEL
<= LESS THAN THE DETECTION LIMIT

TABLE XV

HAZARDOUS CONSTITUENTS
SEMI-VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	1,2,4-TRICHLORO-BENZENE (ug/l)	1,2-DIPHENYL-HYDRAZINE (ug/l)	2,4-DINITRO-TOLUENE (ug/l)	2,6-DINITRO-TOLUENE (ug/l)	2-CHLORO-NAPHTHALENE (ug/l)	2-METHYL-NAPHTHALENE (ug/l)	2-NITRO-ANILINE (ug/l)
MW-1	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<50
MW-2	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<50
MW-3	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<50
MW-4	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<50

NOTE:
< = LESS THAN THE DETECTION LIMIT

TABLE XV (CONT'D.)

HAZARDOUS CONSTITUENTS
SEMI-VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	3,3'-DICHLORO-BENZIDINE (ug/L)	3-NITRO-ANILINE (ug/L)	4-BROMO-PHENYL-PHENYL-ETHER (ug/L)	4-CHLORO-PHENYL-PHENYL-ETHER (ug/L)	4-CHLORO-ANILINE (ug/L)	4-NITRO-ANILINE (ug/L)	ACE-NAPHTHENE (ug/L)	ACE-NAPHTHYLENE (ug/L)
MW-1	25-Jan-89	2	<10	<50	<10	<10	<20	<50	<10	<10
MW-2	25-Jan-89	2	<10	<50	<10	<10	<20	<50	<10	<10
MW-3	25-Jan-89	2	<10	<50	<10	<10	<20	<50	<10	<10
MW-4	25-Jan-89	2	<10	<50	<10	<10	<20	<50	<10	<10

NOTE:
< = LESS THAN THE DETECTION LIMIT

TABLE XV (CONT'D.)

HAZARDOUS CONSTITUENTS
SEMI-VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	ANILINE (ug/L)	ANTRACENE (ug/L)	BIS (2-ETHYL-HEXYL) PHTHALATE (ug/L)	BENZIDINE (ug/L)	BENZOIC ACID (ug/L)	BENZYL ALCOHOL (ug/L)	BIS (2-CHLORO-ETHYL) ETHER (ug/L)	BIS (2-CHLORO-ISOPROPYL) ETHER (ug/L)
MW-1	25-Jan-89	2	<20	<10	<10	<40	<50	<20	<10	<10
MW-2	25-Jan-89	2	<20	<10	<10	<40	<50	<20	<10	<10
MW-3	25-Jan-89	2	<20	<10	<10	<40	<50	<20	<10	<10
MW-4	25-Jan-89	2	<20	<10	<10	<40	<50	<20	<10	<10

NOTE:
< = LESS THAN THE DETECTION LIMIT

TABLE XV (CONT'D.)

HAZARDOUS CONSTITUENTS
SEMI-VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	BIS (2-CHLORO-ETHOXY) METHANE (ug/L)	BENZO(a) ANTHRACENE (ug/L)	BENZO(a) PYRENE (ug/L)	BENZO(b) FLUORO-ANTHENE (ug/L)	BENZO (g,h,i) PERYLENE (ug/L)	BENZO(k) FLUORO-ANTHENE (ug/L)	BUTYL-BENZYL-PHTHALATE (ug/L)	CHRYSENE (ug/L)
MW-1	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<10	<10
MW-2	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<10	<10
MW-3	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<10	<10
MW-4	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<10	<10

NOTE:
< = LESS THAN THE DETECTION LIMIT

TABLE XV (CONT'D.)

HAZARDOUS CONSTITUENTS
SEMI-VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	DI-N-OCTYL-PHTHALATE (ug/L)	DIBENZO-(a,h) ANTHRACENE (ug/L)	DIBUTYL-PHTHALATE (ug/L)	DIETHYL-PHTHALATE (ug/L)	DIMETHYL-PHTHALATE (ug/L)	DIBENZO-FURAN (ug/L)	FLUORENE (ug/L)	FLUORO-ANTHENE (ug/L)
MW-1	25-Jan-89	2	<10	<10	<50	<10	<25	<10	<10	<10
MW-2	25-Jan-89	2	<10	<10	<50	<10	<25	<10	<10	<10
MW-3	25-Jan-89	2	<10	<10	<50	<10	<25	<10	<10	<10
MW-4	25-Jan-89	2	<10	<10	<50	<10	<25	<10	<10	<10

NOTE:
< = LESS THAN THE DETECTION LIMIT

TABLE XV (CONT'D.)

HAZARDOUS CONSTITUENTS
SEMI-VOLATILE ORGANICS

WELL	DATE	SAMPLE EVENT	HEXA-CHLORO-BENZENE (ug/L)	HEXA-CHLORO-BUTADIENE (ug/L)	HEXA-CHLORO-CYCLO-PENTADIENE (ug/L)	HEXA-CHLORO-ETHANE (ug/L)	INDENO-(1,2,3-c,d) PYRENE (ug/L)	ISOPHORONE (ug/L)	N-NITROSO-DI-N-PROPYL-AMINE (ug/L)
MW-1	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<40
MW-2	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<40
MW-3	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<40
MW-4	25-Jan-89	2	<10	<10	<10	<10	<10	<10	<40

NOTE:
< = LESS THAN THE DETECTION LIMIT

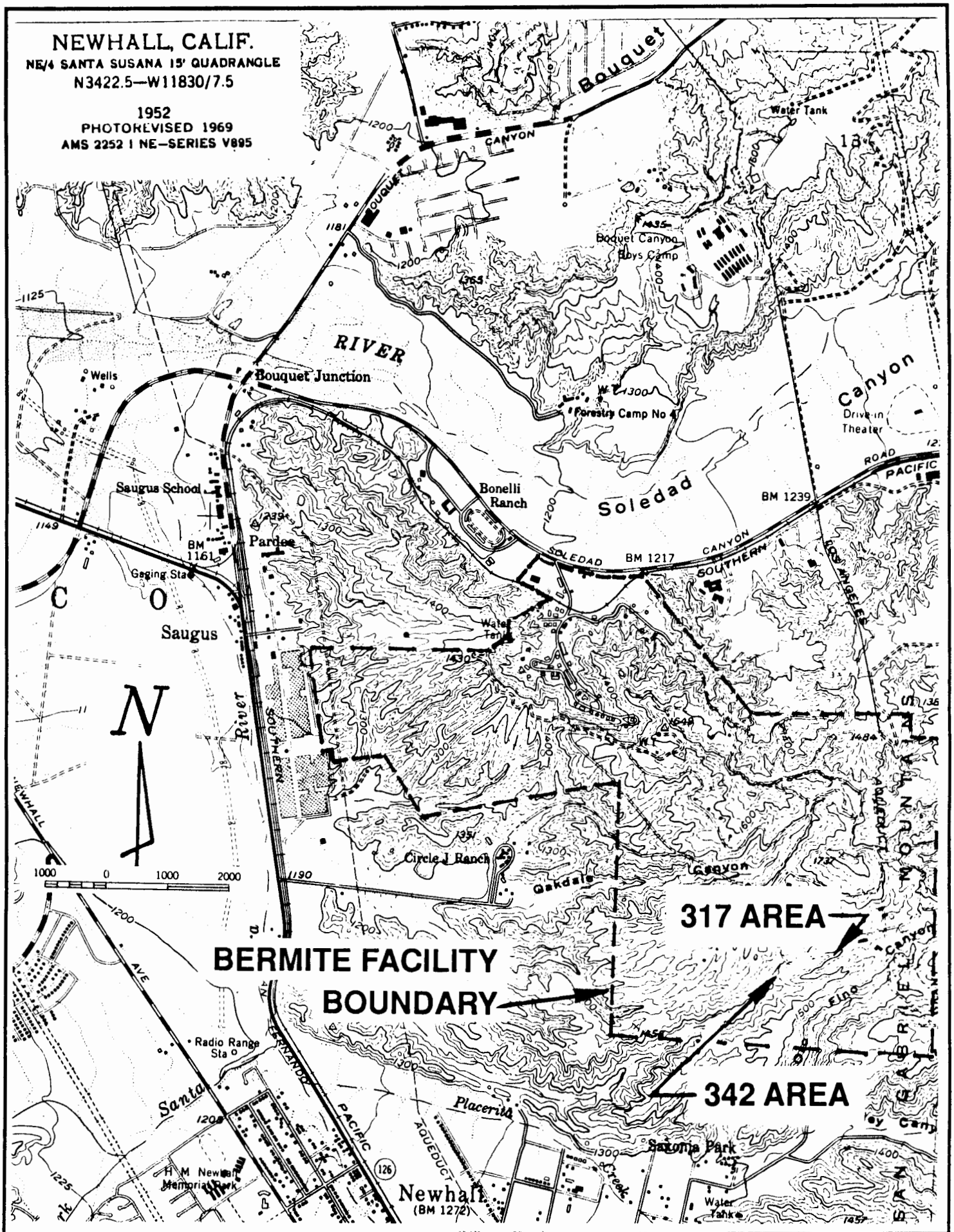
TABLE XV (CONT'D.)

HAZARDOUS CONSTITUENTS
SEMI-VOLATILE ORGANICS

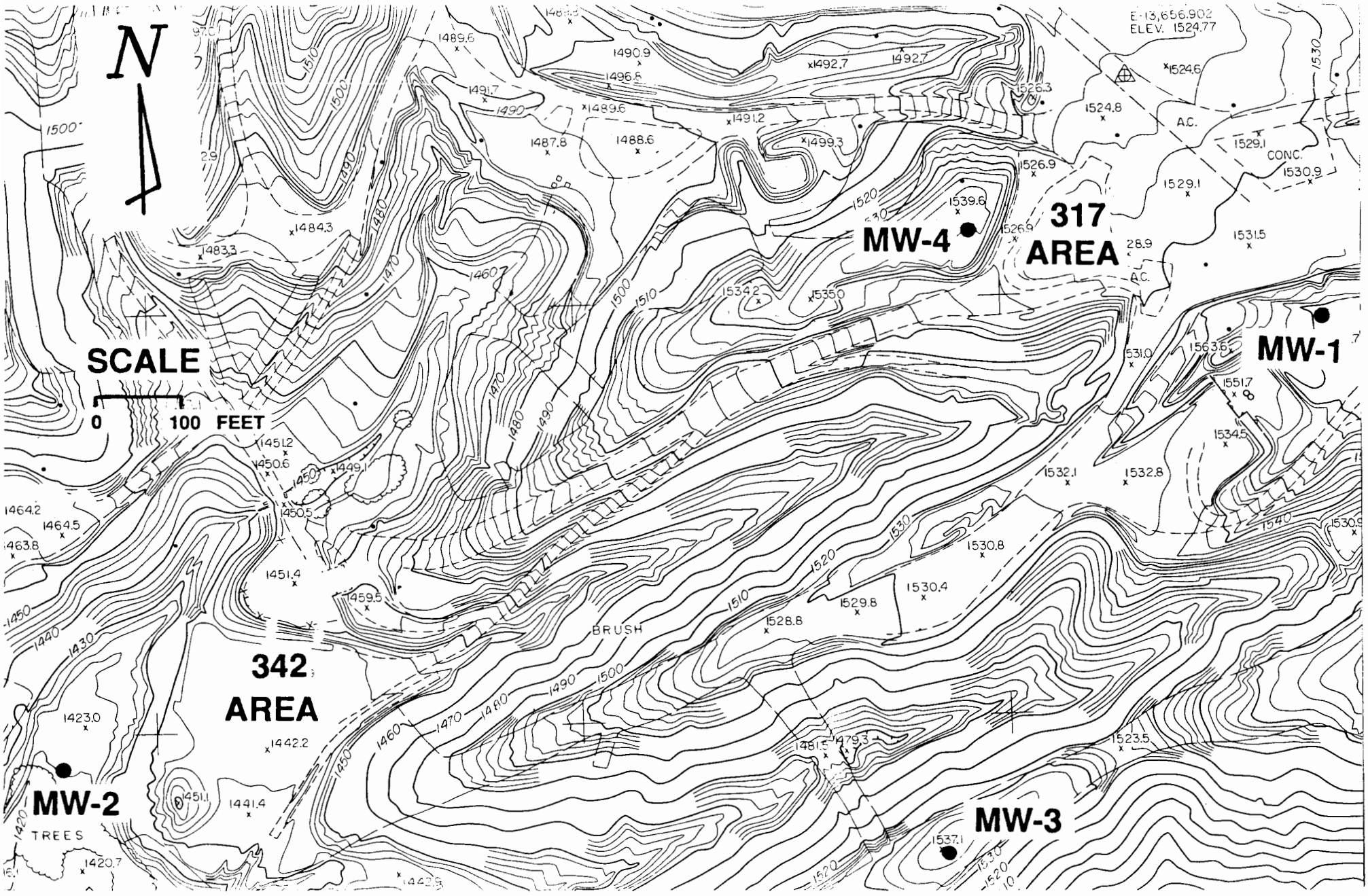
WELL	DATE	SAMPLE EVENT	N-NITROSO-DIMETHYL-AMINE (ug/L)	N-NITROSO-DIPHENYL-AMINE (ug/L)	NAPHTHALENE (ug/L)	NITRO-BENZENE (ug/L)	PHENANTHRENE (ug/L)	PYRENE (ug/L)
MW-1	25-Jan-89	2	<80	<10	<10	<10	<10	<10
MW-2	25-Jan-89	2	<80	<10	<10	<10	<10	<10
MW-3	25-Jan-89	2	<80	<10	<10	<10	<10	<10
MW-4	25-Jan-89	2	<80	<10	<10	<10	<10	<10

NOTE:
< = LESS THAN THE DETECTION LIMIT

FIGURES



BERMITE DIVISION - WHITTAKER CORPORATION	Consulting Engineers	MAR 1989
Site Plan	Wenck Associates, Inc. Twelve Oaks Center 15500 Wayzata Blvd. Wayzata, MN 55391	Fig. 1



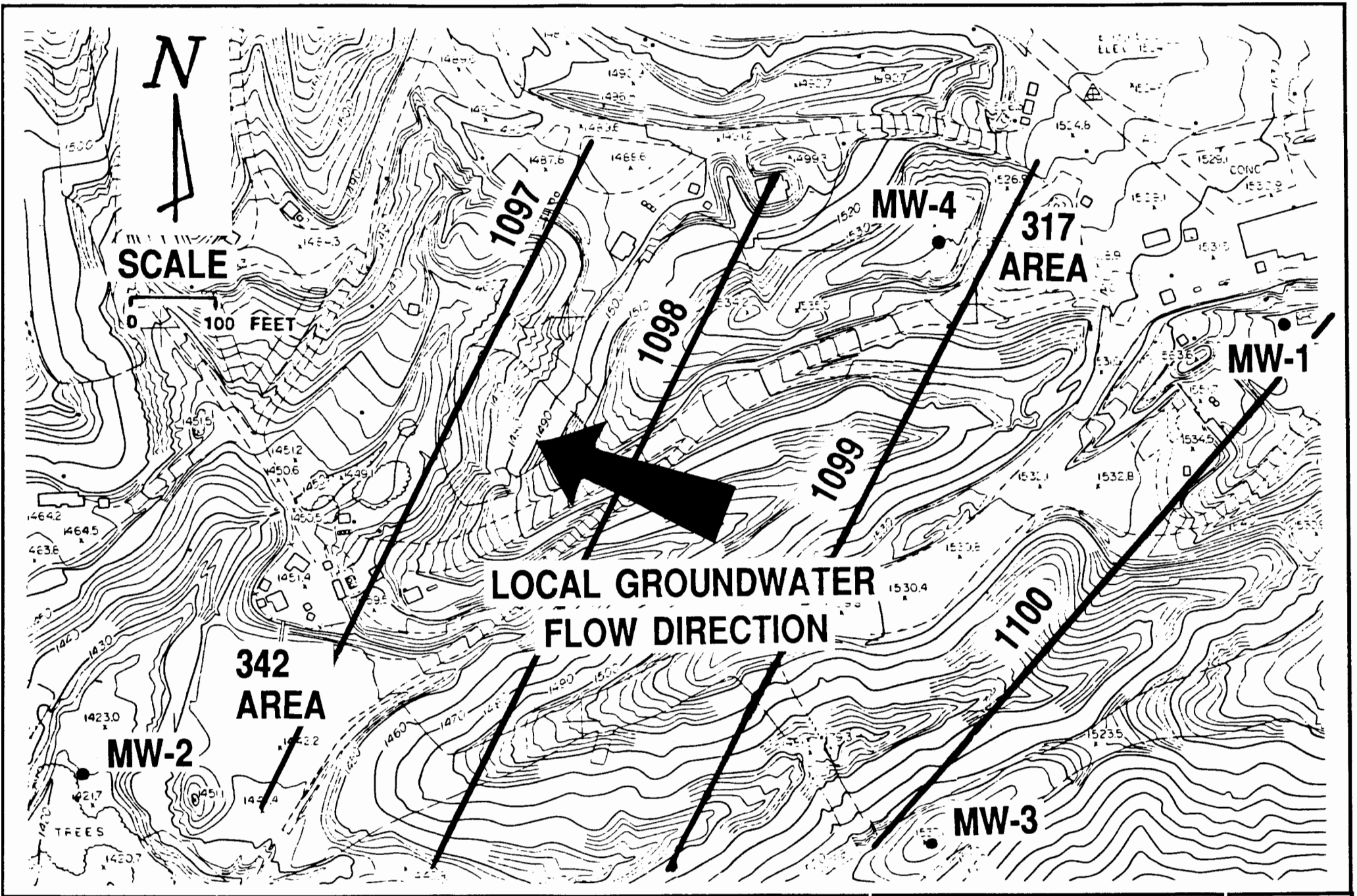
BERMITE DIVISION - WHITTAKER COPRORATION

Location of RCRA Monitoring Wells MW-1, MW-2, MW-3 and MW-4

WAI
Consulting Engineers
Wenck Associates, Inc.
Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

MAR 1989

Fig. 2



BERMITE DIVISION - WHITTAKER CORPORATION	WAI Wenck Associates, Inc.	Consulting Engineers Twelve Oaks Center 15500 Wayzata Blvd. Wayzata, MN 55391	MAR 1989
Potentiometric Contours and Groundwater Flow Direction			Fig. 3

APPENDIX A

PHOTOGRAPHS

Sampling at Well W-1 for all parameters
Sample is Being Filtered for Dissolved Metals Analysis

Filtered Sample is Transferred to Sample Container Prior to Sealing and Labeling

Groundwater Monitoring Well W-4
Sampling for Volatile Organic
Compounds

DHS Personnel Preparing to Split Sample at Well W-1

APPENDIX B

ANALYSIS METHOD PROTOCOLS

(Refer to Quarterly Sampling Report No. 1)

APPENDIX C

SAMPLE CONTAINER CERTIFICATES OF ANALYSIS

CHEM *Chemists in the Container Business™*

1000 ml amber glass

I-CHEM RESEARCH

CERTIFICATE OF ANALYSIS

Analysis of Lot 8334113 January 23, 1989

This lot has been analyzed by Furnace Atomic Absorption, Flame Atomic Absorption, Cold-Vapor Atomic Absorption and ICP-Atomic Emission spectroscopy. The following analytical results were obtained:

Element	Concentration (ug/L)	Element	Concentration (ug/L)
Hg	< 0.2	Zn	< 10
As	< 5	Cu	< 10
Se	< 2	Ni	< 20
Sb	< 5	Al	< 80
Ag	< 5	Mn	< 10
Ba	< 50	Cr	< 10
Be	< 1	B	< 100
Co	< 20	Fe	< 50
Pb	< 4	Cd	< 1
Tl	< 5	V	< 10
Sn	< 20		

The lot was also analyzed for extractables by GC/MS.The following compounds were analyzed for and either not found or found in concentrations less than 5 ug/L:

N-Nitroso-dimethylamine
Phenol
Aniline
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Benzyl alcohol
Bis(2-chloro-isopropyl) ether
4-Methylphenol
N-Nitroso-n-dipropylamine
Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
4-Chloroaniline
Hexachlorobutadiene
4-chloro-3-methylphenol
2-Methylnaphthalene
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethyl Phthalate
Acenaphthalene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethyl Phthalate
4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Di-n-butyl Phthalate
Fluoranthene
Benzidine
Pyrene
Butyl benzyl Phthalate
3,3'-Dichlorobenzidine
Benz(a)anthracene
Bis(2-ethylhexyl) Phthalate
Chrysene
Di-n-octyl Phthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(a,h)perylene
N-Nitrosodiphenylamine

Contact our laboratory if additional information is required.

Please keep this certificate for your records and to facilitate any necessary correspondence regarding lot # 8334113.

Marvin Rudd, President

CHEM *Chemists in the Container Business™*

1000 ml amber glass

I-CHEM RESEARCH

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1,2-Dichlorobenzene
Benzyl alcohol
Bis(2-chloro-isopropyl) ether
4-Methylphenol
N-Nitroso-n-dipropylamine
Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene

4-Chloroaniline
Hexachlorobutadiene
4-chloro-3-methylphenol
2-Methylnaphthalene
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethyl Phthalate
Acenaphthalene
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4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethyl Phthalate
4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol

4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Di-n-butyl Phthalate
Fluoranthene
Benzidine
Pyrene
Butyl benzyl Phthalate
3,3'-Dichlorobenzidine
Benz(a)anthracene
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Benzo(k)fluoranthene
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Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(a,h)perylene
N-Nitrosodiphenylamine

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Bis(2-chloro-isopropyl) ether
4-Methylphenol
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Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
4-Chloroaniline
Hexachlorobutadiene
4-chloro-3-methylphenol
2-Methylnaphthalene
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethyl Phthalate
Acenaphthalene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethyl Phthalate
4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
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Pentachlorophenol
Phenanthrene
Di-n-butyl Phthalate
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Benzidine
Pyrene
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3,3'-Dichlorobenzidine
Benz(a)anthracene
Bis(2-ethylhexyl) Phthalate
Chrysene
Di-n-octyl Phthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(a,h)perylene
N-Nitrosodiphenylamine

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Marvin Rudd, President

CHEM *Chemists in the Container Business™*

I-CHEM RESEARCH

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Ag	< 5	Mn	< 10
Ba	< 50	Cr	< 10
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Co	< 20	Fe	< 50
Pb	< 4	Cd	< 1
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Phenol
Aniline
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Benzyl alcohol
Bis(2-chloro-isopropyl) ether
4-Methylphenol
N-Nitroso-n-dipropylamine
Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
4-Chloroaniline
Hexachlorobutadiene
4-chloro-3-methylphenol
2-Methylnaphthalene
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethyl Phthalate
Acenaphthalene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethyl Phthalate
4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Di-n-butyl Phthalate
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Chrysene
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Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(a,h)perylene
N-Nitrosodiphenylamine

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Please keep this certificate for your records and to facilitate any necessary correspondence regarding lot # 8334113.

Marvin Rudd, President

CHEM *Chemists in the Container Business™*

1000 ml plastic

I-CHEM RESEARCH

CERTIFICATE OF ANALYSIS

Analysis of Lot 8257273 September 23, 1988

This lot has been analyzed by Furnace Atomic Absorption, Flame Atomic Absorption, Cold-Vapor Atomic Absorption and ICP-Atomic Emission spectroscopy. The following analytical results were obtained:

Element	Concentration (ug/L)
Hg	< 0.2
As	< 5
Se	< 2
Sb	< 5
Ag	< 5
Ba	< 50
Be	< 1
Co	< 20
Pb	< 4
Tl	< 5
Sn	< 20
Zn	< 10
Cu	< 10
Ni	< 20
Al	< 80
Mn	< 10
Cr	< 10
B	< 100
Fe	< 50
Cd	< 1
V	< 10

Contact our laboratory if additional information is required.

Please keep this certificate for your records and to facilitate any necessary correspondence regarding lot # 8257273.

John Carmody
Laboratory Manager

CHEM *Chemists in the Container Business™*

1000 ml plastic

I-CHEM RESEARCH

CERTIFICATE OF ANALYSIS

Analysis of Lot 8257223 September 23, 1988

This lot has been analyzed by Furnace Atomic Absorption, Flame Atomic Absorption, Cold-Vapor Atomic Absorption and ICP-Atomic Emission spectroscopy. The following analytical results were obtained:

Element	Concentration (ug/L)
Hg	< 0.2
As	< 5
Se	< 2
Sb	< 5
Ag	< 5
Ba	< 50
Be	< 1
Co	< 20
Pb	< 4
Tl	< 5
Sn	< 20
Zn	< 10
Cu	< 10
Ni	< 20
Al	< 80
Mn	< 10
Cr	< 10
B	< 100
Fe	< 50
Cd	< 1
V	< 10

Contact our laboratory if additional information is required.

Please keep this certificate for your records and to facilitate any necessary correspondence regarding lot # 8257223.

John Carmody
Laboratory Manager

CHEM *Chemists in the Container Business™*

250 ml amber glass

I-CHEM RESEARCH

CERTIFICATE OF ANALYSIS

Analysis of Lot 8316033 January 23, 1989

This lot has been analyzed by Furnace Atomic Absorption, Flame Atomic Absorption, Cold-Vapor Atomic Absorption and ICP-Atomic Emission spectroscopy. The following analytical results were obtained:

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Hg	< 0.2	Zn	< 10
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Se	< 2	Ni	< 20
Sb	< 5	Al	< 80
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Ba	< 50	Cr	< 10
Be	< 1	B	< 100
Co	< 20	Fe	< 50
Pb	< 4	Cd	< 1
Tl	< 5	V	< 10
Sn	< 20		

The lot was also analyzed for extractables by GC/MS.The following compounds were analyzed for and either not found or found in concentrations less than 5 ug/L:

N-Nitroso-dimethylamine
Phenol
Aniline
Bis(2-chloroethyl) ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Benzyl alcohol
Bis(2-chloro-isopropyl) ether
4-Methylphenol
N-Nitroso-n-dipropylamine
Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
4-Chloroaniline
Hexachlorobutadiene
4-chloro-3-methylphenol
2-Methylnaphthalene
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethyl Phthalate
Acenaphthalene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethyl Phthalate
4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Di-n-butyl Phthalate
Fluoranthene
Benzidine
Pyrene
Butyl benzyl Phthalate
3,3'-Dichlorobenzidine
Benz(a)anthracene
Bis(2-ethylhexyl) Phthalate
Chrysene
Di-n-octyl Phthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(a,h)perylene
N-Nitrosodiphenylamine

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Marvin Rudd, President

I-CHEM *Chemists in the Container Business*™

I-CHEM RESEARCH

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4-Nitrophenol
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4-Nitroaniline
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Pyrene
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Chrysene
Di-n-octyl Phthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(a,h)perylene
N-Nitrosodiphenylamine

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4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol

4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Di-n-butyl Phthalate
Fluoranthene
Benzidine
Pyrene
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Benzyl alcohol
Bis(2-chloro-isopropyl) ether
4-Methylphenol
N-Nitroso-n-dipropylamine
Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Dimethylphenol
Bis(2-chloroethoxy) methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
4-Chloroaniline
Hexachlorobutadiene
4-chloro-3-methylphenol
2-Methylnaphthalene
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethyl Phthalate
Acenaphthalene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethyl Phthalate
4-Chlorophenyl phenyl ether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Di-n-butyl Phthalate
Fluoranthene
Benzidine
Pyrene
Butyl benzyl Phthalate
3,3'-Dichlorobenzidine
Benz(a)anthracene
Bis(2-ethylhexyl) Phthalate
Chrysene
Di-n-octyl Phthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(a,h)perylene
N-Nitrosodiphenylamine

Contact our laboratory if additional information is required.

Please keep this certificate for your records and to facilitate any necessary correspondence regarding lot # 8316033.

Marvin Rudd, President

APPENDIX D

FIELD LOG

Sampling Event No. 2

GWS - Greg Smith
JP - John Pelloquin
Cloudy & Drizzle 55°

RCRA Groundwater Sampling - Wells W-1, W-2, W-3, & W-4

Well	TOC	Depth to Water	Water Elev	Time Pump Turned On
W-1	1561.07	461.25	1099.82	1542
W-2	1424.04	327.66	1096.38	~~1612~~ 0856
W-3	1538.07	437.82	1100.25	1600
W-4	1537.92	439.00	1098.92	1535

* Depth to water measured with "Solinist" water leve

* Presence of organic vapors checked in each well upon grening - vapors detectable

* pumping rate of well #1 reduced to ~ 100 ml/ at 1000 hrs (1-24-89)

Presence of Immiscible Layer	Flow Rate	Comments
No	110GPM	
No	115GPM	Fuse problem - well started up next day.
No	5GPM	
No	1.5GPM	

1400
1600 hrs 1-24-89 - sunny, windy

Sample well W-2

Sample Log

Sample I.D.	# containers	type	time (CST)	comments
MW2/O/2	3	40ml	1600	
~~MW2/F/2~~ field blank	1	40ml	1600	
MW2/P/2	2	1000 ml	1600	
MW2/C/2/1-4	4	250 ml	1605	
MW2/B/2/1-4	4	250 ml	1605	
MW2/G/2	2	1000 ml	1610	
MW2/D/2	3	1000 ml	1610	
MW2/A/2/1-4	4	500 ml/pl.	1615	
MW2/E/2	1	1000 ml pl.	1620	
MW2/F/2	1	whirlpack	1620	
MW2/J/2	1	1000 ml/pl	1620	total metals pH = 2.0
MW2/L/2	1	250 ml.	1625	total silver pH = 2.0
MW2/K/2	1	1000 ml pl	1630	diss. metals pH = 2.0
MW2/M/2	1	250 ml	1630	diss. silver pH = 2.0
MW2/H/2	1	1000 ml pl.	1630	
MW2/N/2	1	500 ml pl.	1635	
MW2/I/2	1	500 ml pl.	1640	
MW2/Q/2	1	500 ml pl.	1640	

1445
1645 - Stabilization readings taken after samples

(See pg. 7)

1500
1700 hrs 1-24-89 Notes on sampling:

* All samples sealed w/ chain of custody seals and placed into coolers
* chain of custody documentation and sample analysis request sheets filled out for well MW2
* Max-Min thermometers, placed in coolers
* samples for TOC & TOX filled completely full - no air bubbles allowed, same for 40 ml vials for VOC analysis.
* well MW2 is left "on" until all wells sampled
* continue to take stabilization readings at wells MW1, MW3 & MW4 (see pg 9)

1615 * Take samples from well MW2 to FGL

* Organize sampling containers and supplies for next day

1800 End of Day

1/24/89 Sunny
GWS 55°
JP
CFT

Well Stabilization Readings in all wells

well	time	temp °C	pH	Specific Conduct	Dat
W-4	0920	21°C	6.75	~~480~~	1/24/8
W-1	0930	21.5	7.05	~~440~~	1/24/8
W-3	0945	22	7.10	~~530~~ 570	1/24/8
W-2	0955	22	6.65	3320	1/24/8
W4	1030	22°	7.40	460	1/24/8
W-1	1037	23°	7.15	~~455~~ 465	1/24/8
W-3	1050	22	7.05	570	1/24/8
W-2	1055	22	6.70	~~3240~~ 3310	1/24/8
W-4	1220	22	7.45	460	1/24/8
W-1	1225	22	7.05	~~4350~~ 450	1/24/8
W-3	1235	22	7.15	570	1/24/8
W-2	1245	21.5	6.80	3350	1/24/8
W2	1350	21.5	6.75	3320	1/24/8
W2	1445 1645	21.5	6.75	3300	1/24/8
W-1	1524	22	7.05	440	1/24/8
W-3	1528	22		570	1/24/8
W-4	1518	22	7.15	460	1/24/8

1-25-84
CFT, GWS, JP
0630, clear, cool

0645 Prepare for sampling wells 1, 3, 4
Stabilization readings taken at these wells, see below

0745 Setting at well 3 for sampling - see pg. 13 for sample log

Well Stabilization readings

well	time	temp °C	pH	specific cond.	Date
4	0700	20	7.40	425	1-25
1	0710	22	7.10	430	1-25
3	0720	22	7.15	540	1-25
2	0730	21	6.65	3200	1-25
3	0835	22	7.15	540	1-25
1	0845	22	7.05	440	1-25
4	0915	22	7.10	460	1-25
1	1035	22	7.10	460	1-25
4	1100	20	7.40	460	1-25
4	1215	20.5	7.35	460	1-25

S:

Windy

0745 Sample log - well MW3

Sample I.D.	# containers	type	time	comments
MW3/O/Z	3	40ml	0750	
MW3/P/Z	2	1000ml	0750	
MW3/C/Z/F-4	4	250ml	0755	
MW3/B/Z/F-4	4	250ml	0755	
MW3/G/Z	2	1000ml	0800	
MW3/D/Z	3	1000ml	0800	
MW3/A/Z/F-4	4	500ml pl.	0805	
MW3/E/Z	1	1000ml pl.	0805	
MW3/F/Z	1	whirlpack	0810	
MW3/J/Z	1	1000ml pl	0815	total metals, pH = 2.0
MW3/L/Z	1	250ml	0815	total silver, pH = 2.0
MW3/K/Z	1	1000ml pl.	0820	diss. metals, pH = 2.0
MW3/M/Z	1	250ml	0820	diss. silver, pH = 2.0
MW3/H/Z	1	1000ml pl	0825	
MW3/N/Z	1	500ml pl.	0825	
MW3/I/Z	1	500ml pl.	0825	
MW3/Q/Z	1	500ml pl.	0825	

0835 - take stabilization readings see pg. 12
seal all containers with Chain of Custody
Seals - place in coolers w/ice

0850 * setting to sample at well 1

* prepare field blanks - also set travel blanks out on sample table

Sample I.D.	# cont.	type	time	comments
Field Blank VOC	1	40ml	0855	amber glass
" " TOC	1	250ml	0855	"
" " TOX	1	250 ml	0855	"
" " Pesticides	1	1000 ml	0850	"
" " phenol	1	1000 ml	0850	"
" " Semi-Voc	1	1000 ml	0850	"

* Complete lables on Travel Blanks which were made up at FGL labs

Sample I.D.	# cont.	type	~~time~~ date	comments
Travel Blank	1	40ml	1-25-89	clear glass
" " TOC	1	250 ml	"	amber glass
" " TOX	1	250ml	"	"
" " Pesticides	1	1000 ml	"	"
" " Phenols	1	1000 ml	"	"
" " Semi-VOC	1	1000 ml	"	"

Place all samples back into coolers w/ice

0915 - take Stabilization readings at well 1 (see pg. 12)

0920 - DHS People Show up { - Alan Sanchez, - HENRY CHEW, - DOUGLAS BAUTISTA, - CHARLES HUMPHREY
Explain procedure

0930 Start Sampling at well MW1

Field Sample Log

Sample I.D.	# Containers	type	time	Comments
MW1/O/2	~~4~~ 3	40 ml	0930	1 ~~Duplicate~~
MW1/P/2	2	1000 ml	0935	
MW1/C/2/1-4	4	250 ml	0940	
MW1/B/2/1-4	4	250 ml	0945	
MW1/G/2	2	1000 ml	0950	
MW1/D/2	3	1000 ml	0950	
MW1/A/2/1-4	4	500 ml pl.	0955	
MW1/E/2	1	1000 ml pl.	1010	
MW1/F/2	1	whirlpack	1010	
MW1/J/2	1 - 1000 ml pl.		1015	pH = 2.0 field Adjusted total Ag
MW1/L/2	1 250 ml		1015	" total Ag
MW1/K/2	1 1000 ml pl		1015	" Diss. Mo
MW1/M/2	1 250 ml		1015	" Diss. Ag.
MW1/H/2	1 1000 ml pl.		1020	
MW1/N/2	1 500 ml pl.		1020	
MW1/I/2	1 ~~6~~10 ml pl.		1020	
MW1/Q/2	1 500 ml pl.		1020	

~~1035~~ take well Stabilization readings (see pg 12)
DHS took samples for selected analysis at approx. same time as those for Bromide

1100 hrs set up at well MW4
Stabilization readings taken - (see pg. 12)

Field Sample Log

Sample I.D.	# containers	type	time	Comments
MW4/O/2	3	40 ml	1110	
MW4/O/2 Duplicate	3	40 ml	1110	Duplicate Sample
MW4/P/2	2	1000 ml	1110	
MW4/C/2/1-4	4	250 ml	1115	
MW4/B/2/1-4	4	250 ml	1120	
MW4/G/2	2	1000 ml	1125	
MW4/D/2	3	1000 ml	1135	
MW4/A/2/1-4	4	250 ml	1140	
MW4/E/2	1	1000 ml pl.	1140	
MW4/F/2	1	whirlpacks	1145	
MW4/J/2	1	1000 ml pl.	1155	pH=2.0 field Adj.
MW4/L/2	1	250 ml	1155	"
MW4/K/2	1	1000 ml pl.	1155	"
MW4/M/2	1	250 ml	1155	"
MW4/H/2	1	1000 ml pl.	1200	
MW4/N/2	1	500 ml pl.	1200	
MW4/I/2	1	500 ml pl.	1200	
MW4/Q/2	1	500 ml pl.	1200	

1210 hrs - take stabilization readings (see pg. 12)
Put chain of custody seals on containers and place in coolers on ice

1230 hrs * All samples from wells 1, 3 & 4 have seals and are in coolers - same for field & trip Blanks

* Chain of Custody Forms and Sample Analysis request sheets filled out for all samples

* All wells shut down and locked up until next sampling episode

1300 hrs * Max-Min thermometers placed in coolers, coolers shut and sealed with chain of custody seals

* - Sign chain of custody forms over to Tim B.

* Samples Delivered to FGL laboratories

End of Sampling Episode No. 2

No. 1

Wenck Associates, Inc.
832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

CHAIN OF CUSTODY RECORD

FIELD COORDINATOR: Chris Thornburg

PROJ. NO.: 35-014

PROJECT NAME: Bermite

SAMPLERS (Signature): [signature]

Sample No./ Location	DATE	TIME	COMP	GRAB	Sample No. / STATION LOCATION	NUMBER OF CONTAINERS	REMARKS
MW3	1/25	0850		X	MW3/O/2	3-40ml	Analysis Type O
MW3	1/25	0750		X	MW3/P/2	2-1000ml	" " P
MW3	1/25	0755		X	MW3/C/2/1-4	4-250ml	" " C
MW3	1/25	0755		X	MW3/B/2/1-4	4-250ml	" " B
MW3	1/25	0800		X	MW3/G/2	2-1000ml	" " G
MW3	1/25	0800		X	MW3/D/2	3-1000ml	" " D
MW3	1/25	0805		X	MW3/A/2/1-4	4-500ml	" " A
MW3	1/25	0805		X	MW3/E/2	1-1000ml	" " E
MW3	1/25	0810		X	MW3/F/2	1 WHIRLPAK	" " F
MW3	1/25	0815		X	MW3/J/2	1-1000ml	" " J, pH=7.0 field adjusted
MW3	1/25	0815		X	MW3/L/2	1-250ml	" " L, pH=7.0 field adjusted
MW3	1/25	0820		X	MW3/K/2	1-1000ml	" " K, pH=7.0 field adjusted

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	1-25	1300	[signature]	[signature]	1/25	1443	Julie McCallister

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks

DISTRIBUTION: Original Accompanies Shipment; Copy to Coordinator Field Files

N° 2

Wenck Associates, Inc.
8332 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

CHAIN OF CUSTODY RECORD

FIELD COORDINATOR: CHRIS THOMPSON

PROJ. NO.	PROJECT NAME
85-01.4	BERMITE

SAMPLERS (Signature):

Sample STA. NO. Location	DATE	TIME	COMP	GRAB	Sample No. STATION LOCATION	NUMBER OF CONTAINERS	REMARKS
MW3	1/25	0820		X	MW3/H/2	1-250ml	Analysis Type M, field pH=2.0
MW3	1/25	0825		X	MW3/H/2	1-1000ml	" " H
MW3	1/25	0825		X	MW3/N/2	1-500ml	" " N
MW3	1/25	0825		X	MW3/I/2	1-500ml	" " I
MW3	1/25	0825		X	MW3/Q/2	1-500ml	" " Q

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	1-25	1300			1/25	1443	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks	

DISTRIBUTION: Original Accompanies Shipment; Copy to Coordinator Field Files

N° 3

Wenck Associates, Inc.
832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

CHAIN OF CUSTODY RECORD

FIELD COORDINATOR: CHRIS THOMPSON

PROJ. NO.: 85-01.4 | PROJECT NAME: BERNITE

SAMPLERS (Signature):

Sample STA. NO. Location	DATE '89	TIME	COMP	GRAB	STATION LOCATION / Sample No.	NUMBER OF CONTAINERS	REMARKS
MW1	1/25	0930		x	MW1|O|2	3-40ml	Analysis Type O
MW1	1/25	0935		x	MW1|P|2	2-1000ml	" " P
MW1	1/25	0940		x	MW1|C|2/1-4	4-250ml	" " C
MW1	1/25	0945		x	MW1|B|2/1-4	4-250ml	" " B
MW1	1/25	0950		x	MW1|G|2	2-1000ml	" " G
MW1	1/25	0950		x	MW1|D|2	3-1000ml	" " D
MW1	1/25	0955		x	MW1|A|2/1-4	4-500ml	" " A
MW1	1/25	1010		x	MW1|E|2	1-1000ml	" " E
MW1	1/25	1010		x	MW1|F|2	1-WHIRLPACK	" " F
MW1	1/25	1015		x	MW1|J|2	1-1000ml	" " J pH = 2.0 field adjusted
MW1	1/25	1015		x	MW1|L|2	1-250ml	" " L "
MW1	1/25	1015		x	MW1|K|2	1-1000ml	" " K "

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	1-25	1300			1/25	1443	Julie McCalister
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks

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N° 4

Wenck Associates, Inc.
832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

CHAIN OF CUSTODY RECORD

FIELD COORDINATOR: Chris Thompson

PROJ. NO.	PROJECT NAME
85-01.4	Bethite

SAMPLERS (Signature)

Sample STA. NO. Location	DATE 99	TIME	COMP	GRAB	Sample No. STATION LOCATION	NUMBER OF CONTAINERS	REMARKS
MW1	1/25	1015		x	MW1|H|2	1-250ml	Analysis Type M Field pH=2
MW1	1/25	1020		x	MW1|N|2	1-1000ml	" " H
MW1	1/25	1020		x	MW1|N|2	1-500ml	" " N
MW1	1/25	1020		x	MW1|I|2	1-500ml	" " I
MW1	1/25	1020		x	MW1|Q|2	1-500ml	" " Q

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	1-25	1300			1/25	1444	Julie McAlister
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks	

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NO. 1

Wenck Associates, Inc.
832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

CHAIN OF CUSTODY RECORD

FIELD COORDINATOR: Chris Thompson

PROJ. NO.: 85-01.4

PROJECT NAME: Bermite

SAMPLERS (Signature):

SAMPLE STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NUMBER OF CONTAINERS	REMARKS
Field Blank	11/25	0855		✓		1-40ml vial	Analysis Type O (VOC)
"	"	0855		✓		1-250ml	" " B (TOC)
"	"	0855		✓		1-250ml	" " C (TOX)
"	"	0850		✓		1-1000ml	" " D, (pesticides)
"	"	0850		✓		1-1000 ml	" " G, (phenol)
"	"	0850		✓		1-1000ml	" " D, (semi-VOC)
Trip Blank	11/25	-		✓		1-40ml	Analysis Type O (VOC)
"	"	-		✓		1-250ml	Analysis Type B (TOC)
"	"	-		✓		1-250ml	" " C (TOX)
"	"	-		✓		1-1000ml	" " D (pesticides)
"	"	-		✓		1-1000ml	" " G (phenol)
"	"	-		✓		1-1000ml	" " P (semi-VOC)

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	11-25	1300			11/25	1445	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks	

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WAI

Wenck Associates
832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

CHAIN OF CUSTODY RECORD

COORDINATOR: CHRIS THOMPSON

PROJ. NO.: 35-014

PROJECT NAME: BERKITE

SAMPLERS (Signature):

Sta. No. / Location	DATE '89	TIME	COMP	GRAB	STATION LOCATION	NUMBER OF CONTAINERS	REMARKS
MW4	1/25	1185		X	MW4/M/2	1-250ml	Analysis Type M, pH = 2, field filt
MW4	1/25	1200		X	MW4/H/2	1-1000ml	" " H
MW4	1/25	1200		X	MW4/N/2	1-500ml	" " N
MW4	1/25	1200		X	MW4/I/2	1-500ml	" " I
MW4	1/25	1200		X	MW4/Q/2	1-500ml	" " Q
MW4	1/25	1110 ~~1110~~		X	MW4/O/2 Duplicate	3-40ml	Analysis Type O

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	1-25	1300			1/25	1445	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks	

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Wen ociat
832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

CHAIN OF CUSTODY RECORD

FIELD COORDINATOR: CHRIS THOMPSON

PROJ. NO.	PROJECT NAME
85-01.4	BERMITE

SAMPLERS (Signature)

Sample STA. NO. Location	DATE '89	TIME	COMP	GRAB	Sample No. STATION LOCATION	NUMBER OF CONTAINERS	REMARKS
MW4	1/25	1110		X	MW4|O|2	3-40ml	Analysis Type O
MW4	1/25	1110		X	MW4|P|2	2-1000ml	" " P
MW4	1/25	1115		X	MW4|C|2|1-4	4-250ml	" " C
MW4	1/25	1120		X	MW4|B|2/1-4	4-250ml	" " B
MW4	1/25	1125		X	MW4|G|2	2-1000ml	" " G
MW4	1/25	1135		X	MW4|D|2	3-1000ml	" " D
MW4	1/25	1140		X	MW4|A|2/1-4	4-500ml	" " A
MW4	1/25	1140		X	MW4|E|2	1-1000ml	" " E
MW4	1/25	1145		X	MW4|F|2	1 WHIRLPACK	" " F
MW4	1/25	1155		X	MW4|J|2	1-1000ml	" " J, pH=2.0 field Adj
MW4	1/25	1155		X	MW4|L|2	1-250ml	" " L, "
MW4	1/25	1155		X	MW4|K|2	1-1000ml	" " K, "

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	1-25	1300			1/25	1444	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks	

DISTRIBUTION: Original Accompanies Shipment; Copy to Coordinator Field Files

APPENDIX F

ANALYSIS REQUEST FORMS

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1-24-89

Internal Temperature of Sample Container: 20-32°F

Notes on Samples: _____

Analysis Required

Sample I.D.	Laboratory I.D.	pH specific cond.	TOC	TOX			
MW2/A/2/1	14302	✓					
MW2/A/2/2	✓ -1	✓					
MW2/A/2/3	✓ -2	✓					
MW2/A/2/4	✓ -3	✓					
MW2/B/2/1	14303		✓				
MW2/B/2/2	-1		✓				
MW2/B/2/3	-2		✓				
MW2/B/2/4	-3		✓				
MW2/C/2/1	14304			✓			
MW2/C/2/2	-1			✓			
MW2/C/2/3	-2			✓			
MW2/C/2/4	-3			✓			

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1-24-89

Internal Temperature of Sample Container: 20-32 °F

Notes on Samples: _____

Sample I.D.	Laboratory I.D.	Analysis Required: Endrin, Lindane, Toxaphene, 2,4,5-TP	Radium, Gross Alpha, Beta	Coliform Bacteria	Phenols	N, Nitrate, Sulfate, Sodium, Iron, Manganese	Total phosphate
MW2/D/2	14305	✓					
MW2/E/2	14306		✓				
MW2/F/2	14301			✓			
MW2/G/2	14307				✓		
MW2/H/2	14308					✓	
MW2/I/2	14309						✓

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1-24-89

Internal Temperature of Sample Container: 20-32 °F

Notes on Samples: _____

Sample I.D.	Laboratory I.D.	Analysis Required: Total Metals As, Ba, Cd, Cr, Pb Hg, Se, Cu, Sb, Tl	Dissolved Metals As, Ba, Cd, Cr, Pb Hg, Se, Cu, Sb, Tl	Total Silver Ag	Dissolved Silver Ag	Fluoride	Volatile organic compounds
MW2/J/2	14310	✓					
MW2/K/2	14311		✓				
MW2/L/2	14312			✓			
MW2/M/2	14313				✓		
MW2/N/2	14314					✓	
MW2/O/2	14315						✓

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1-24-89

Internal Temperature of Sample Container: 20-32°F

Notes on Samples: _____

		Analysis Required					
		Semivolatile organics	Formaldehyde				
Sample I.D.	Laboratory I.D.						
MW2/P/2	14310	✓					
MW2/Q/2	14311		✓				

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1/25/89

Internal Temperature of Sample Container: 24°F

Notes on Samples: _____

Analysis Required

Sample I.D.	Laboratory I.D.	pH specific conductance	TOC	TOX			
MW1/A/2/1-4	14318, 1-3	x					
MW3/A/2/1-4	14319, 1-3	x					
MW4/A/2/1-4	14320, 1-3	x					
MW1/B/2/1-4	1421?, 1-3		x				
MW3/B/2/1-4	1421?, 1-3		x				
MW4/B/2/1-4	4214, 1-3		x				
MW1/C/2/1-4	14321, 1-3			x			
MW3/C/2/1-4	14322, 1-3			x			
MW4/C/2/1-4	14323, 1-3			x			

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1/25/89

Internal Temperature of Sample Container: 24° F

Notes on Samples: _____

Analysis Required

Sample I.D.	Laboratory I.D.	Endrin, Lindane, Toxaphene, 2,4,5-TP	Radium, Gross Alpha, Beta	Coliform Bacteria	Phenols	Nitrate, Sulfate, Sodium, Iron, Manganese	Total phosphate
MW1 D 2		x					
MW3 D 2		x					
MW4 D 2		x					
MW1 E 2	14336		x				
MW3 E 2	14337		x				
MW4 E 2	14338		x				
MW1 F 2	14324			x			
MW3 F 2	14325			x			
MW4 F 2	14326			x			
MW1 G 2	14225				x		
MW3 G 2	14226				x		
MW4 G 2	14227				x		

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1/25/89

Internal Temperature of Sample Container: 24°F

Notes on Samples: _____

		Analysis Required					
		Endrin, Lindane, Toxaphene, 2,4,5-TP	Radium, Gross Alpha, Beta	Coliform Bacteria	Phenols	Nitrate, Sulfate, Sodium, Iron, Manganese	Total phosphate
Sample I.D.	Laboratory I.D.						
MW1/H/2	14343					x	
MW3/H/2	14344					x	
MW4/H/2	14345					x	
MW1/I/2	14340						x
MW3/I/2	14341						x
MW4/I/2	14342						x

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1/25/89

Internal Temperature of Sample Container: 24°F

Notes on Samples: _____

Analysis Required

Sample I.D.	Laboratory I.D.	Total Metals As, Ba, Cd, Cr, Pb Hg, Se, Cu, Sb, Tl	Dissolved Metals As, Ba, Cd, Cr, Pb Hg, Se, Cu, Sb, Tl	Total Silver Ag	Dissolved Silver Ag	Flowrate	Volatile organic compounds
MW1/J/2	14346	x					
MW3/J/2	14347	x					
MW4/J/2	14348	x					
MW1/K/2	14349		x				
MW3/K/2	14350		x				
MW4/K/2	14224		x				
MW1/L/2	14327			x			
MW3/L/2	14328			x			
MW4/L/2	14329			x			
MW1/M/2	14330				x		
MW3/M/2	14331				x		
MW4/M/2	14332				x		

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1/25/89

Internal Temperature of Sample Container: 24°F

Notes on Samples: _____

Sample I.D.	Laboratory I.D.	Analysis Required: Total Metals As, Ba, Cd, Cr, Pb, Hg, Se, Cu, Sb, Tl	Dissolved Metals As, Ba, Cd, Cr, Pb, Hg, Se, Cu, Sb, Tl	Total Silver Ag	Dissolved Silver Ag	Flouride	Volatile organic compounds
MW1|N|2	14333					x	
MW3|N|2	14334					x	
MW4|N|2	14335					x	
MW1|O|2	14218						x
MW3|O|2	14219						x
MW4|O|2	14220						x

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: Bermite

Sampler Name: Chris Thompson Tele. No. (612) 475-0858

Name of Person Receiving Samples: _____

Date Samples Received: 1/25/89

Internal Temperature of Sample Container: 24°F

Notes on Samples: _____

		Analysis Required					
		Semivolatile organics	Formaldehyde				
Sample I.D.	Laboratory I.D.						
MW1|P|2	14221	x					
MW3|P|2	14222	x					
MW4|P|2	14223	x					
MW1|Q|2	14228		x				
MW3|Q|2	14229		x				
MW4|Q|2	14230		x				

APPENDIX G

LABORATORY QA/AC PROGRAM

QUALITY ASSURANCE MANUAL FOR WATER
ANALYSES AND HAZARDOUS WASTE ANALYSES

Sampling

1. Samples should be representative of the source.
2. For chemical tests, the source should be run for a minimum of 15 minutes before sampling. Plastic containers may be used, except those for which glass containers should be used (See EPA Manual for preservation and holding time).
3. Fresh drawn samples are preferred.
4. For microbiological tests:
   a. We prefer to collect samples in sterile bottles provided by this laboratory.
   b. Allow the water to run for at least three (3) minutes and turn off. Burn the faucet with propane burner and turn on the water again for about one (1) minute to flush out loose crust. Carefully fill our bottle to about ½ inch from the top. Return the sample to the laboratory without delay. Samples that are not processed immediately should be stored in the refrigerator. Samples should be processed within six (6) hours from time of sampling. Under no circumstance can processing be more than thirty (30) hours after sampling. (See Standard Methods, 16th Edition, Page 859.)
5. Make available in the sample receiving area written instructions for sample preservation.

Chain of Custody

1. When sample arrives, enter in the log book, lab tag and/or work sheet the following information:
   a. Date the sample was received.
   b. Sampler's name.
   c. Description of sample.
   d. Type of analysis desired.
2. Attach the lab tag onto the container. The sample is then turned over to the analyst. The analyst will have custody of the sample until analyses are completed.
3. Chain of custody samples will be either in the immediate possession of the receiving analyst or in the appropriate locked sample storage.

Laboratory Operations

1. Deionized water
   a. Set the automatic shut-off water at a resistance of 500,000 ohms.
   b. The DI water should be checked monthly for pH and standard plate count.
   c. DI water should be tested annually for inhibitory residue suitability and heavy metals (to include lead, cadmium, chromium, copper, nickel and zinc).
2. Instruments
   a. Follow operations procedures outlined in manufacturer's handbook that comes with the instruments.

c. Date all chemicals.
d. Inspect all media in the tubes before use, to make sure that there are no bubbles present. Notify clients by phone when three or more positive tubes are found. Indicate in report the name of person contacted and the date of notification.
e. Do not use mouth pipet for waste water samples. Use pipet bulb.
f. All thermometers should be standardized against a certified thermometer and record such information in the log book.
g. Temperature of incubator should be checked and recorded daily.

3. Hazardous Waste Analyses
a. A log book should be maintained for preparation of all standards, information such as suppliers, lot numbers, wt/vol. of standards used, date prepared and name of analyst should be recorded.
b. A log book sall be maintained documenting repairs and maintenance of equipment.
c. For all organic analyses, three point calibration curves should be run and documented. On each working day, standards should be run and so long as the standards are within 20% of the predicted response, samples can be run. Otherwise the three point calibration will be rerun. Sample data must be bracketed by standards
d. For organic analyses by GC, all positive results should be confirmed either by a second dissimilar column or by GC/MS.
e. These standards will be used for calibration. AA flame analysis calibration data for standards should be recorded in a laboratory notebook or work sheet.
f. Check standards should be run every 15 samples for AA analysis.
g. Organic analysis, blanks, duplicates and spike will be analyzed once for each batch of samples, or type of matrix or 20 samples, whichever is more frequent. The location of chromotogram for blanks, duplicates and spikes will be noted on sample worksheets for each batch. For inorganic metal analysis, the spikes and duplicates will be recorded in notebook or worksheet.
h. Results of analysis on blanks will be recorded on the worksheet of the batch.
i. Records of analysis of external referance samples such as those from EPA, MBS or other sources should be maintained for inspection and review.
j. Current acceptance limits on metal analysis is ±10% on duplicates and spikes. It will be ±30% on duplicates and spikes for organic analyses (Methods 8150, 8120, 8040, 8080). Standard deviation on duplicates and spikes will be developed after 20 analyses. And the acceptance limits will become ±3 standard deviations.
k. All analytical and quality control results should be reviewed and approved by a supervisor. Approval of the work will be indicated by supervisor's signature.
l. When quality control data is out of control, the analyst should:
    1) recheck calculation
    2) recalibrate the three standards
    3) if that fails, reanalyze the sample, starting from beginning.
    4) if that fails, indicate in the report the suspicion of matrix interference.
m. All analytical procedures for sample analysis should be referenced in the final report.
n. For GC/MS analyses, the overall precision and accuracy of recovery is monitored by the addition of surrogate standards to every sample.
o. For corrosivity test, a minimum of four coupons should be maintained.

b. Have qualified specialists certify the analytical balances once a year.
c. pH meter should be standardized on the day of use with two (2) buffer solutions (pH4, 7 and/or 10).
d. Conductivity meter should be standardized once a month with 0.01 NKCL solution.
e. Turbidity meter should be standardized with standards before use. A 4.0 NTU standard made from EPA procedures should be checked once a month against commercial standard.
f. Do not use reference electrode that contains AG:AgCl for pH adjustment when silver is the analyte.
g. When using HGA, metal standards should be tested in duplicate The difference should not exceed UCL. If exceeded, repeat the analysis and investigate the cause. Corrective actions should be taken before proceeding with quantitative analysis.
h. The lab director should be notified immediately if any sign of malfunction occurs on any instrument so that he can decide if a qualified serviceman should be consulted.

3. Method of Analysis
Use methods from EPA Manual (600-4-79-020 & SW846) or standard methods. If method other than these are used, indicate in the report the reference.

Quality Control

1. Drinking water analyses:
   a. Each analyst should be trained until the analyst is competent to run the test.
   b. Metal analyses should be made with one or two standards along with the unknown, depending on the instructions in the procedure. If the standard deviates beyond the UCL, rerun the standard and the sample.
   c. Once a year, ranges, UCL, UWL of each metal test should be calculated and recorded.
   d. For trace analyses, all glasswares should be cleaned with nitric acid and rinsed with DI water.
   e. Consult EPA QC Handbook, pages 9-2, 9-3, 9-4 for skills time rating of various tests.
   f. For general mineral analysis, check the anion and cation balances. If the difference is morethan 0.3 mg/l or 5% which ever is greater, recheck the analysis.
   g. Anytime a new batch of titrant is made, standard should be analyzed in triplicate to insure that the new titrant is suitable.
   h. For auto analyses, at least three (3) standard solutions should be included for every 37 or less samples.
   i. Make chemical standards for BOD5 and COD tests and check it monthly.
   j. Participate in EPA and/or State sponsored referee sample programs.
   k. Save EPA samples to be used for quality control purposes.
   l. When metal analysis of drinking water exceeds MCL levels, repeat the analysis and/or check with alternative method when available
   m. Lab Director will review all the data on inorganic chemical analyses before reporting.
2. Microbiological analyses:
   a. Media stored in our refrigerator should be incubated at the appropriate temperature for 24 hours before being used and tubes showing any change should be discarded.
   b. Check pH of all media after each sterilization.

APPENDIX H

LABORATORY QA/QC ANALYTICAL REPORTS AND CHROMATOGRAMS

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TOTAL ORGANIC HALOGEN IN WATER
EPA METHOD 9020

February 14, 1989
Lab No. Spikes

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Spikes
Sampled By: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Sample Description	Percent Recovery
Blank Spike	93.8
Duplicate Spike	87.2

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green
Laboratory Director

Jeanine Surber, B.S.
Environmental Biologist

CG/JS:mlh

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-408-19	MW4/B/2/1 14214 BC/QC DUP	25 JAN 89
01-408-20	MW1/B/2/1 14212 BC/QC DUP	25 JAN 89

PARAMETER	01-408-19	01-408-20
Total Organic Carbon (TOC), mg/L	<3	<3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-408-21	MW4/B/2/1 14214 BC/QC SPK	25 JAN 89
01-408-22	MW1/B/2/1 14212 BC/QC SPK	25 JAN 89

PARAMETER	01-408-21	01-408-22
Total Organic Carbon (TOC), Percent	97	105

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, REAGENT WATER SAMPLES	DATE SAMPLED
01-408-23	Laboratory Control Standard	

PARAMETER	01-408-23
Total Organic Carbon (TOC), Percent	98

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
01-408-24	Reagent Blank	

PARAMETER	01-408-24
Total Organic Carbon (TOC), mg/L	<3

Jeffrey A. Erion, Laboratory Manager

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14215-2

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Travel Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

REPORT OF ANALYSIS

Parameter	Test Results mg/l	Detection Limit mg/l	MCL mg/l
Endrin	ND	0.00001	0.0002
Lindane	ND	0.0004	0.004
Methoxychlor	ND	0.01	0.1
Toxaphene	ND	0.0005	0.005
2,4-D	ND	0.01	0.1
2,4,5-TP Silvex	ND	0.001	0.01

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan

Kim Phan, B.S.
Environmental Chemist

Eric Lu

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14215-3

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW1/D/2 Spike
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

REPORT OF ANALYSIS

Parameter	Percent Recovery	Detection Limit mg/l	MCL mg/l
2,4-D	63	0.01	0.1
2,4,5-TP Silvex	69	0.001	0.01
2,4,5-T	58	0.001	0.01

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan, B.S.
Environmental Chemist

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14305-2

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW2/D/2 Spike
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24, 1989
Date Received: January 24, 1989

REPORT OF ANALYSIS

Parameter	Percent Recovery	Detection Limit mg/l	MCL mg/l
Lindane	113	0.0004	0.004
Methoxychlor	117	0.01	0.1

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan

Kim Phan, B.S.
Environmental Chemist

Eric Lu

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14305-3

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4/D/2 Spike Duplicate
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24, 1989
Date Received: January 24, 1989

REPORT OF ANALYSIS

Parameter	Percent Recovery	Detection Limit mg/l	MCL mg/l
Lindane	108	0.0004	0.004
Methoxychlor	120	0.01	0.1

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan

Kim Phan, B.S.
Environmental Chemist

Eric Lu

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14217-2

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Field Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

REPORT OF ANALYSIS

Parameter	Test Results mg/l	Detection Limit mg/l	MCL mg/l
Endrin	ND	0.00001	0.0002
Lindane	ND	0.0004	0.004
Methoxychlor	ND	0.01	0.1
Toxaphene	ND	0.0005	0.005
2,4-D	ND	0.01	0.1
2,4,5-TP Silvex	ND	0.001	0.01

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan

Kim Phan, B.S.
Environmental Chemist

Eric Lu

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14225-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Field Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Results ug/l
2,4,6-Trichlorophenol	*10
2,4-Dichlorophenol	*10
2,4-Dimethylphenol	*10
2,4-Dinitrophenol	*25
2-Nitrophenol	*10
2-Chlorophenol	*10
2-Methyl-4,6-dinitrophenol	*50
4-Chloro-3-methylphenol	*10
4-Nitrophenol	*25
Pentachlorophenol	*10
Phenol	*10

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14226-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW3/G/2 Travel Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Results ug/l
2,4,6-Trichlorophenol	*10
2,4-Dichlorophenol	*10
2,4-Dimethylphenol	*10
2,4-Dinitrophenol	*25
2-Nitrophenol	*10
2-Chlorophenol	*10
2-Methyl-4,6-dinitrophenol	*50
4-Chloro-3-methylphenol	*10
4-Nitrophenol	*25
Pentachlorophenol	*10
Phenol	*10

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14227

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4/G/2 QC Spike
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Percent Recovery
2,4,6-Trichlorophenol	120
2,4-Dichlorophenol	110
2,4-Dimethylphenol	120
2,4-Dinitrophenol	44
2-Nitrophenol	110
2-Chlorophenol	100
2-Methyl-4,6-dinitrophenol	150
4-Chloro-3-methylphenol	120
4-Nitrophenol	70
Pentachlorophenol	66
Phenol	71

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14227

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4/G/2 QC Duplicate Spike
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Percent Recovery
2,4,6-Trichlorophenol	230
2,4-Dichlorophenol	230
2,4-Dimethylphenol	250
2,4-Dinitrophenol	97
2-Nitrophenol	240
2-Chlorophenol	190
2-Methyl-4,6-dinitrophenol	250
4-Chloro-3-methylphenol	220
4-Nitrophenol	110
Pentachlorophenol	140
Phenol	130

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: Control Standard

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Laboratory Control Standard
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Percent Recovery
2,4,6-Trichlorophenol	92
2,4-Dichlorophenol	110
2,4-Dimethylphenol	88
2,4-Dinitrophenol	29
2-Nitrophenol	95
2-Chlorophenol	79
2-Methyl-4,6-dinitrophenol	30
4-Chloro-3-methylphenol	89
4-Nitrophenol	60
Pentachlorophenol	43
Phenol	92

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: Reagent Blank

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Reagent Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Results ug/l
2,4,6-Trichlorophenol	*10
2,4-Dichlorophenol	*10
2,4-Dimethylphenol	*10
2,4-Dinitrophenol	*25
2-Nitrophenol	*10
2-Chlorophenol	*10
2-Methyl-4,6-dinitrophenol	*50
4-Chloro-3-methylphenol	*10
4-Nitrophenol	*25
Pentachlorophenol	*10
Phenol	*10

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-410

Received: 27 JAN 89
Reported: 10 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-410-6	Travel Blank 14226-1	25 JAN 89

PARAMETER	01-410-6
EPA Method 604 - Phenols	
Date Extracted	01/31/89
Date Analyzed	02/09/89
Dilution Factor, Times 1	1
2,4,6-Trichlorophenol, ug/L	<10
2,4-Dichlorophenol, ug/L	<10
2,4-Dimethylphenol, ug/L	<10
2,4-Dinitrophenol, ug/L	<25
2-Nitrophenol, ug/L	<10
2-Chlorophenol, ug/L	<10
2-Methyl-4,6-dinitrophenol, ug/L	<50
4-Chloro-3-methylphenol, ug/L	<10
4-Nitrophenol, ug/L	<25
Pentachlorophenol, ug/L	<10
Phenol, ug/L	<10

BROWN AND CALDWELL LABORATORIES

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ANALYTICAL REPORT

LOG NO: P89-01-410

Received: 27 JAN 89
Reported: 10 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-410-7	MW4/G/2 14227 BC/QC SPK	25 JAN 89

PARAMETER	01-410-7
EPA Method 604 - Phenols	
Date Extracted	01/31/89
Date Analyzed	02/09/89
Dilution Factor, Times 1	1
2,4,6-Trichlorophenol, Percent	120
2,4-Dichlorophenol, Percent	110
2,4-Dimethylphenol, Percent	120
2,4-Dinitrophenol, Percent	44
2-Nitrophenol, Percent	110
2-Chlorophenol, Percent	100
2-Methyl-4,6-dinitrophenol, Percent	150
4-Chloro-3-methylphenol, Percent	120
4-Nitrophenol, Percent	70
Pentachlorophenol, Percent	66
Phenol, Percent	71

BROWN AND CALDWELL LABORATORIES

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ANALYTICAL REPORT

LOG NO: P89-01-410

Received: 27 JAN 89
Reported: 10 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-410-8	MW4/G/2 14227 BC/QC DUP-SPK	25 JAN 89

PARAMETER	01-410-8
EPA Method 604 - Phenols	
Date Extracted	01/31/89
Date Analyzed	02/09/89
Dilution Factor, Times 1	1
2,4,6-Trichlorophenol, Percent	230
2,4-Dichlorophenol, Percent	230
2,4-Dimethylphenol, Percent	250
2,4-Dinitrophenol, Percent	97
2-Nitrophenol, Percent	240
2-Chlorophenol, Percent	190
2-Methyl-4,6-dinitrophenol, Percent	250
4-Chloro-3-methylphenol, Percent	220
4-Nitrophenol, Percent	110
Pentachlorophenol, Percent	140
Phenol, Percent	130

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
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ANALYTICAL REPORT

LOG NO: P89-01-410

Received: 27 JAN 89
Reported: 10 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, REAGENT WATER SAMPLES	DATE SAMPLED
01-410-9	Laboratory Control Standard	

PARAMETER	01-410-9
EPA Method 604 - Phenols	
Date Extracted	02/02/89
Date Analyzed	02/09/89
Dilution Factor, Times 1	1
2,4,6-Trichlorophenol, Percent	92
2,4-Dichlorophenol, Percent	110
2,4-Dimethylphenol, Percent	88
2,4-Dinitrophenol, Percent	29
2-Nitrophenol, Percent	95
2-Chlorophenol, Percent	79
2-Methyl-4,6-dinitrophenol, Percent	30
4-Chloro-3-methylphenol, Percent	89
4-Nitrophenol, Percent	60
Pentachlorophenol, Percent	43
Phenol, Percent	92

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

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ANALYTICAL REPORT

LOG NO: P89-01-410

Received: 27 JAN 89
Reported: 10 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
01-410-10	Reagent Blank	

PARAMETER	01-410-10
EPA Method 604 - Phenols	
Date Extracted	01/31/89
Date Analyzed	02/09/89
Dilution Factor, Times 1	1
2,4,6-Trichlorophenol, ug/L	<10
2,4-Dichlorophenol, ug/L	<10
2,4-Dimethylphenol, ug/L	<10
2,4-Dinitrophenol, ug/L	<25
2-Nitrophenol, ug/L	<10
2-Chlorophenol, ug/L	<10
2-Methyl-4,6-dinitrophenol, ug/L	<50
4-Chloro-3-methylphenol, ug/L	<10
4-Nitrophenol, ug/L	<25
Pentachlorophenol, ug/L	<10
Phenol, ug/L	<10

BC/QC DUP-SPK P89-01-410-8 DOUBLE SPIKED
--L.LEM

Jeffrey A. Erlon, Laboratory Manager

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

FORMALDEHYDE ANALYSES

February 14, 1989
Lab No. 14229 - 14728

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Monitoring Wells
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24 & 25, 1989
Date Received: January 25, 1989 Date Analyzed: Not Available

REPORT OF ANALYSIS

Sample Description	Percent Recovery
MW4/Q/2 Spike	58
MW4/Q/2 - Duplicate Spike	61
Laboratory Control Standard	92
Reagent Blank	*100

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
01-396-5	MW4/Q/2 14230 BC/QC SPK	25 JAN 89

PARAMETER	01-396-5
Formaldehyde, Percent	58

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
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FAX: (818) 795-8579

LOG NO: P89-01-396

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
01-396-6	MW4/Q/2 14230 BC/QC DUP-SPK	25 JAN 89

PARAMETER	01-396-6
Formaldehyde, Percent	61

BROWN AND CALDWELL LABORATORIES

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FAX: (818) 795-8579

LOG NO: P89-01-396

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
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Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, REAGENT WATER SAMPLES	DATE SAMPLED
01-396-7	Laboratory Control Standard	

PARAMETER	01-396-7
Formaldehyde, Percent	92

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-396

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
01-396-8	Reagent Blank	

PARAMETER	01-396-8
Formaldehyde, ug/L	<100

Jeffrey A. Erion, Laboratory Manager

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14218-2

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Duplicate
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14218-3

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Travel Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

MAIN OFFICE – & LABORATORY 853 CORPORATION STREET – P.O. BOX 272 SANTA PAULA, CALIFORNIA 93060-0272 (805) 525-2824 (805) 659-0910
BRANCH OFFICE – & LABORATORY 2500 STAGECOACH ROAD STOCKTON, CALIFORNIA 95205 (209) 942-0181

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14315-2

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Field Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24, 1989
Date Received: January 24, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14220-2

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Duplicate
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14220-3

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4/O/2 Spike
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	Percent Recovery	Compound	Percent Recovery
Acetone	91	1,1-Dichloroethene	100
Benzene	103	trans-1,2-Dichloroethene	102
Bromodichloromethane	96	1,2-Dichloropropane	101
Bromoform	92	cis-1,3-Dichloropropene	93
Bromomethane	95	trans-1,3-Dichloropropene	97
Carbon Tetrachloride	97	Ethyl Benzene	96
Chlorobenzene	94	Methyl Ethyl Ketone	79
Chloroethane	95	Methylene Chloride	99
Chloroform	100	1,1,2,2-Tetrachloroethane	94
Chloromethane	80	Tetrachloroethene	94
Dibromochloromethane	93	Toluene	95
1,2-Dichlorobenzene	95	1,1,1-Trichloroethane	97
1,3-Dichlorobenzene	96	1,1,2-Trichloroethane	96
1,4-Dichlorobenzene	95	Trichloroethene	96
1,1-Dichloroethane	103	Trichlorofluoromethane	94
1,2-Dichloroethane	99	Vinyl Chloride	89
		Xylenes	95

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14219-2

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Field Blank
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

Date Analyzed: February 3, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

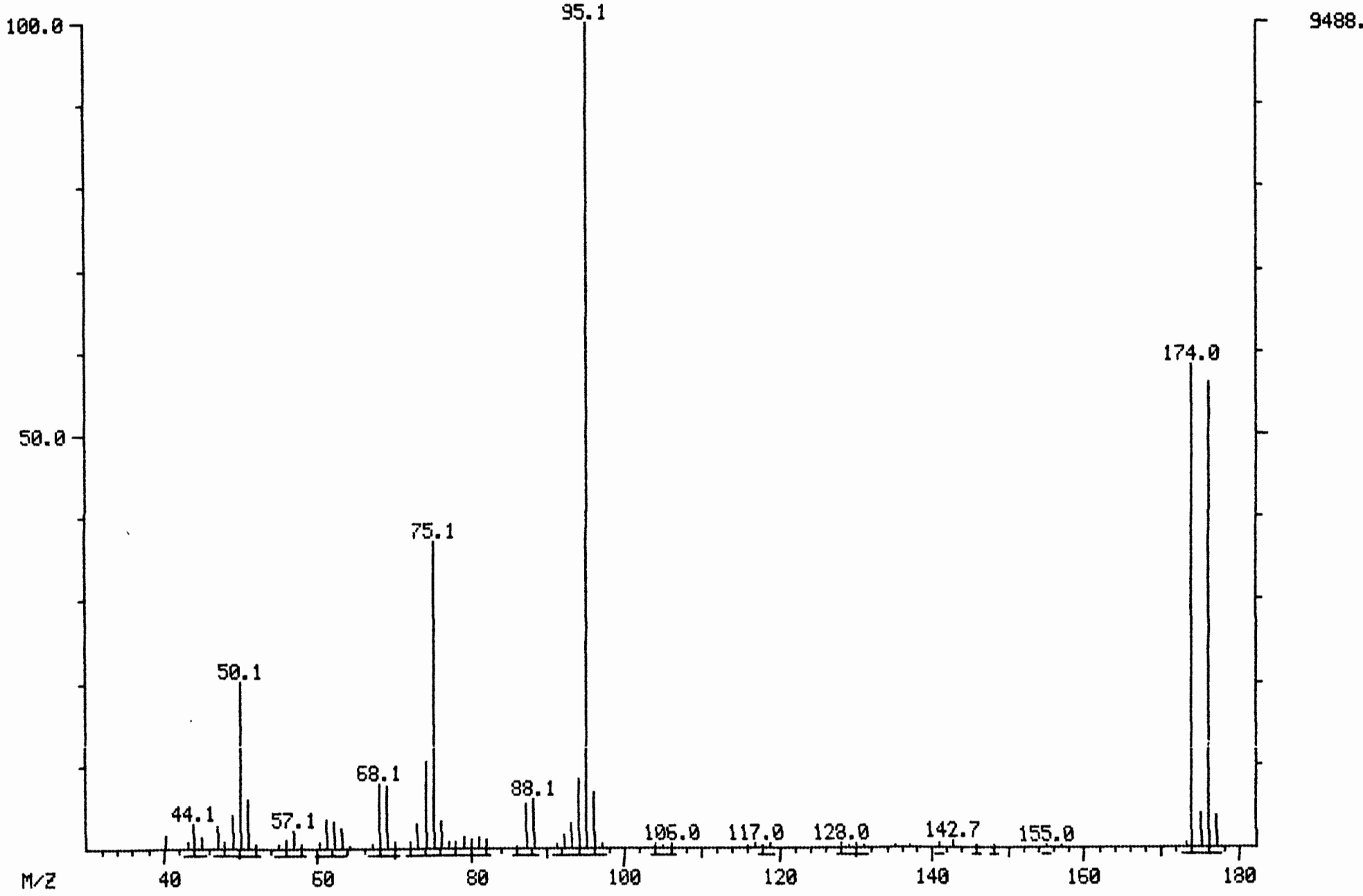
Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

MASS SPECTRUM
02/02/89 10:47:00 + 15:52
SAMPLE: VO STD @15 PPB WITH IS SS STD @10 PPB 25 ML PAT
CONDS.: 35 TO 180 @ 8/MIN
GC TEMP: 130 DEG. C

DATA: 890212 #1905
CALI: 890212 #2

BASE M/Z: 95
RIC: 37568.



GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

Case Number:		Laboratory:		Contract:	
Inst ID:	5100	Sens Date:	02/02/89	Sens Time:	10:47:00
Lab ID:	890212	Cali Date:		Analyst:	EL

Data release authorized by: _____

m/z	Ion Abundance Criteria	Spec #1905	
50	15 to 40% of mass 95	20.26	
75	30 to 60% of mass 95	37.10	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	6.77	
173	less than 1% of mass 95	0.56	
174	greater than 50% of mass 95	58.35	
175	5 to 9% of mass 174	4.12	(7.07) 1
176	between 95% and 101% of mass 174	56.24	(96.38) 1
177	5 to 9% of mass 176	3.77	(6.71) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

Quantitation Report File: 890212

Data: 890212.TI
02/02/89 10:47:00
Sample: VO STD @15 PPB WITH IS SS STD @10 PPB 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: EL Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890212

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	987	8:13	1	1.000	A BB	20181.	10.000	UG/KG	1.86
2	114	1134	9:27	2	1.000	A BB	201726.	10.000	UG/KG	1.86
3	117	1656	13:48	3	1.000	A BB	137703.	10.000	UG/KG	1.86
4	65	1068	8:54	1	1.082	A BV	32433.	11.036	UG/KG	2.05
5	100	1381	11:30	3	0.834	A BB	158683.	9.608	UG/KG	1.78
6	95	1904	15:52	3	1.150	A BB	58193.	12.001	UG/KG	2.23
7	50	585	4:52	1	0.593	A BB	100484.	10.150	UG/KG	1.88
8	62	599	4:59	1	0.607	A BB	82573.	10.391	UG/KG	1.93
9	94	637	5:18	1	0.645	A BB	64603.	11.409	UG/KG	2.12
10	64	649	5:24	1	0.658	A BB	82355.	12.178	UG/KG	2.26
11	101	679	5:39	1	0.688	A BB	84264.	13.377	UG/KG	2.48
12	96	739	6:09	1	0.749	A BB	86878.	12.343	UG/KG	2.29
13	84	793	6:36	1	0.803	A BB	78024.	12.563	UG/KG	2.33
14	96	828	6:54	1	0.839	A BB	100424.	12.796	UG/KG	2.38
15	63	879	7:19	1	0.891	A BB	197441.	14.526	UG/KG	2.70
16	83	998	8:19	1	1.011	A BB	129894.	14.554	UG/KG	2.70
17	97	1026	8:33	2	0.905	A BB	103896.	15.245	UG/KG	2.83
18	62	1079	8:59	1	1.093	A BB	59590.	16.131	UG/KG	3.00
19	78	1078	8:59	2	0.951	A BB	404515.	13.379	UG/KG	2.48
20	117	1050	8:45	2	0.926	A BB	85000.	14.738	UG/KG	2.74
21	63	1211	10:05	2	1.068	A BB	106795.	14.281	UG/KG	2.65
22	130	1177	9:48	2	1.038	A BB	99473.	12.486	UG/KG	2.32
23	83	1255	10:27	2	1.107	A BB	64758.	14.928	UG/KG	2.77
24	75	1332	11:06	2	1.175	A BB	117556.	21.111	UG/KG	3.92
25	75	1431	11:55	2	1.262	A BB	36699.	9.840	UG/KG	1.83
26	92	1393	11:36	3	0.841	A BB	232781.	12.353	UG/KG	2.29
27	97	1465	12:12	2	1.292	A BB	31620.	13.433	UG/KG	2.49
28	129	1540	12:50	2	1.358	A BB	29745.	14.279	UG/KG	2.65
29	164	1496	12:28	3	0.903	A BB	70995.	11.919	UG/KG	2.21
30	112	1662	13:51	3	1.004	A BB	196477.	12.316	UG/KG	2.29
31	106	1685	14:02	3	1.018	A BB	125575.	12.605	UG/KG	2.34
32	106	1709	14:14	3	1.032	A BB	146167.	12.596	UG/KG	2.34
33	106	1709	14:14	3	1.032	A BB	146167.	12.596	UG/KG	2.34
34	173	1831	15:15	2	1.615	A BB	11242.	14.294	UG/KG	2.65
35	83	1465	12:12	3	0.885	A BB	29248.	12.479	UG/KG	2.32
36	146	2150	17:55	3	1.298	A BB	90690.	12.678	UG/KG	2.35
37	146	2171	18:05	3	1.311	A BB	108672.	12.437	UG/KG	2.31
38	146	2256	18:48	3	1.362	A BB	64465.	12.472	UG/KG	2.32
39	43	780	6:30	1	0.790	A BB	7724.	14.838	UG/KG	2.76
40	76	765	6:22	1	0.775	A BB	126443.	12.647	UG/KG	2.35
41	43	953	7:56	2	0.840	A BV	16629.	13.339	UG/KG	2.48
42	104	1795	14:57	3	1.084	A BB	172498.	12.175	UG/KG	2.26

Quantitation Report File: 890213

Data: 890213.TI
02/02/89 11:41:00
Sample: BLANK WITH IS SS STD @10 PPB 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: EL Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890213

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	988	8:14	1	1.000	A BB	15962.	10.000	UG/KG	14.73
2	114	1135	9:27	2	1.000	A BB	163296.	10.000	UG/KG	14.73
3	117	1656	13:48	3	1.000	A BB	110007.	10.000	UG/KG	14.73
4	65	1069	8:54	1	1.082	A BB	25288.	10.879	UG/KG	16.02
5	100	1381	11:30	3	0.834	A BB	128443.	9.735	UG/KG	14.34
6	95	1904	15:52	3	1.150	A BB	45475.	11.739	UG/KG	17.29
7	50	586	4:53	1	0.593	A BB	395.	0.050	UG/KG	0.07
8	62	600	5:00	1	0.607	A BB	212.	0.034	UG/KG	0.05
9	94	639	5:19	1	0.647	A BB	274.	0.061	UG/KG	0.09
10	64	651	5:25	1	0.659	A BB	264.	0.049	UG/KG	0.07
11	101	681	5:40	1	0.689	A BB	325.	0.065	UG/KG	0.10
12	96	741	6:10	1	0.750	A BB	368.	0.066	UG/KG	0.10
13	84	795	6:37	1	0.805	A BB	1391.	0.283	UG/KG	0.42
14	96	830	6:55	1	0.840	A BB	380.	0.061	UG/KG	0.09
15	63	880	7:20	1	0.891	A BB	691.	0.064	UG/KG	0.09
16	83	999	8:19	1	1.011	A BB	1435.	0.203	UG/KG	0.30
17	97	1026	8:33	2	0.904	A BB	760.	0.138	UG/KG	0.20
18	62	1080	9:00	1	1.093	A BB	525.	0.180	UG/KG	0.26
19	78	1080	9:00	2	0.952	A BB	2484.	0.101	UG/KG	0.15
20	117	1051	8:45	2	0.926	A BB	329.	0.070	UG/KG	0.10
21	63	1211	10:05	2	1.067	A BB	641.	0.106	UG/KG	0.16
22	130	1178	9:49	2	1.038	A BB	898.	0.139	UG/KG	0.21
23	83	1256	10:28	2	1.107	A BB	416.	0.118	UG/KG	0.17
24	75	1333	11:06	2	1.174	A BB	896.	0.199	UG/KG	0.29
25	75	1432	11:56	2	1.262	A BB	417.	0.138	UG/KG	0.20
26	92	1393	11:36	3	0.841	A BB	3197.	0.212	UG/KG	0.31
27	NOT	FOUND								
28	129	1540	12:50	2	1.357	A BB	267.	0.158	UG/KG	0.23
29	164	1496	12:28	3	0.903	A BB	391.	0.082	UG/KG	0.12
30	112	1662	13:51	3	1.004	A BB	1034.	0.081	UG/KG	0.12
31	106	1685	14:02	3	1.018	A BB	754.	0.095	UG/KG	0.14
32	106	1710	14:15	3	1.033	A BB	1491.	0.161	UG/KG	0.24
33	106	1710	14:15	3	1.033	A BB	1491.	0.161	UG/KG	0.24
34	173	1830	15:15	2	1.612	A BB	54.	0.085	UG/KG	0.12
35	83	1465	12:12	3	0.885	A BB	269.	0.144	UG/KG	0.21
36	146	2149	17:54	3	1.298	A BB	869.	0.152	UG/KG	0.22
37	146	2170	18:05	3	1.310	A BB	1167.	0.167	UG/KG	0.25
38	146	2256	18:48	3	1.362	A BB	803.	0.194	UG/KG	0.29
39	43	782	6:31	1	0.791	A BB	310.	0.754	UG/KG	1.11
40	76	767	6:23	1	0.776	A BB	804.	0.102	UG/KG	0.15
41	43	954	7:57	2	0.841	A BB	780.	0.773	UG/KG	1.14
42	104	1795	14:57	3	1.084	A BB	979.	0.086	UG/KG	0.13

Quantitation Report File: 890215

Data: 890215.TI
02/02/89 13:07:00
Sample: LAB NO 14315-2 CLIENT ID FIELD BLANK 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

89 0215

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	989	8:14	1	1.000	A BB	16173.	10.000	UG/KG	15.18
2	114	1137	9:28	2	1.000	A BB	156160.	10.000	UG/KG	15.18
3	117	1656	13:48	3	1.000	A BV	104699.	10.000	UG/KG	15.18
4	65	1070	8:55	1	1.082	A BB	24035.	10.205	UG/KG	15.49
5	100	1382	11:31	3	0.835	A BB	122877.	9.786	UG/KG	14.85
6	95	1905	15:52	3	1.150	A BB	40097.	10.876	UG/KG	16.50
7	50	588	4:54	1	0.595	A BB	297.	0.037	UG/KG	0.06
8	62	602	5:01	1	0.609	A BB	215.	0.034	UG/KG	0.05
9	94	641	5:20	1	0.648	A BB	101.	0.022	UG/KG	0.03
10	64	653	5:26	1	0.660	A BB	126.	0.023	UG/KG	0.04
11	101	683	5:41	1	0.691	A BB	543.	0.108	UG/KG	0.16
12	96	743	6:11	1	0.751	A BB	413.	0.073	UG/KG	0.11
13	84	797	6:38	1	0.806	A BB	4581.	0.920	UG/KG	1.40
14	96	832	6:56	1	0.841	A BB	480.	0.076	UG/KG	0.12
15	63	882	7:21	1	0.892	A BB	283.	0.026	UG/KG	0.04
16	83	1000	8:20	1	1.011	A BB	1078.	0.151	UG/KG	0.23
17	97	1028	8:34	2	0.904	A BB	516.	0.098	UG/KG	0.15
18	62	1081	9:00	1	1.093	A BB	124.	0.042	UG/KG	0.06
19	78	1080	9:00	2	0.950	A BB	1558.	0.067	UG/KG	0.10
20	117	1052	8:46	2	0.925	A BB	333.	0.075	UG/KG	0.11
21	63	1212	10:06	2	1.066	A BB	203.	0.035	UG/KG	0.05
22	130	1179	9:49	2	1.037	A BB	1283.	0.208	UG/KG	0.32
23	83	1257	10:28	2	1.106	A BB	117.	0.035	UG/KG	0.05
24	75	1333	11:06	2	1.172	A BB	375.	0.087	UG/KG	0.13
25	75	1432	11:56	2	1.259	A BB	237.	0.082	UG/KG	0.12
26	92	1394	11:37	3	0.842	A BB	2063.	0.144	UG/KG	0.22
27	NOT	FOUND								
28	NOT	FOUND								
29	164	1496	12:28	3	0.903	A BB	666.	0.147	UG/KG	0.22
30	112	1663	13:51	3	1.004	A BB	987.	0.081	UG/KG	0.12
31	106	1686	14:03	3	1.018	A BB	702.	0.093	UG/KG	0.14
32	106	1710	14:15	3	1.033	A BB	1186.	0.134	UG/KG	0.20
33	106	1710	14:15	3	1.033	A BB	1186.	0.134	UG/KG	0.20
34	NOT	FOUND								
35	NOT	FOUND								
36	146	2150	17:55	3	1.298	A BB	785.	0.144	UG/KG	0.22
37	146	2171	18:05	3	1.311	A BB	955.	0.144	UG/KG	0.22
38	146	2258	18:49	3	1.364	A BB	553.	0.141	UG/KG	0.21
39	43	784	6:32	1	0.793	A BB	231.	0.554	UG/KG	0.84
40	76	769	6:24	1	0.778	A BB	1044.	0.130	UG/KG	0.20
41	43	956	7:58	2	0.841	A BB	908.	0.941	UG/KG	1.43
42	104	1796	14:58	3	1.085	A BB	518.	0.048	UG/KG	0.07

Quantitation Report File: 890217

Data: 890217.TI
02/02/89 14:08:00
Sample: LAB NO 14218-2 CLIENT ID DUPLICATE 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890217

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	988	8:14	1	1.000	A BB	16881.	10.000	UG/KG	15.80
2	114	1135	9:27	2	1.000	A BB	167823.	10.000	UG/KG	15.80
3	117	1657	13:48	3	1.000	A BB	112181.	10.000	UG/KG	15.80
4	65	1069	8:54	1	1.082	A BB	23190.	9.433	UG/KG	14.91
5	100	1381	11:30	3	0.833	A BB	130477.	9.698	UG/KG	15.33
6	95	1905	15:52	3	1.150	A BB	43910.	11.116	UG/KG	17.57
7	50	587	4:53	1	0.594	A BB	159.	0.019	UG/KG	0.03
8	62	600	5:00	1	0.607	A BB	114.	0.017	UG/KG	0.03
9	94	638	5:19	1	0.646	A BB	63.	0.013	UG/KG	0.02
10	64	651	5:25	1	0.659	A BB	59.	0.010	UG/KG	0.02
11	101	681	5:40	1	0.689	A BB	390.	0.074	UG/KG	0.12
12	96	740	6:10	1	0.749	A BB	211.	0.036	UG/KG	0.06
13	84	795	6:37	1	0.805	A BB	556.	0.107	UG/KG	0.17
14	96	829	6:54	1	0.839	A BB	261.	0.040	UG/KG	0.06
15	63	880	7:20	1	0.891	A BB	148.	0.013	UG/KG	0.02
16	83	999	8:19	1	1.011	A BB	226.	0.030	UG/KG	0.05
17	NOT FOUND									
18	NOT FOUND									
19	78	1080	9:00	2	0.952	A BB	698.	0.028	UG/KG	0.04
20	117	1052	8:46	2	0.927	A BB	122.	0.025	UG/KG	0.04
21	63	1212	10:06	2	1.068	A BB	53.	0.009	UG/KG	0.01
22	130	1178	9:49	2	1.038	A BB	485.	0.073	UG/KG	0.12
23	NOT FOUND									
24	75	1333	11:06	2	1.174	A BB	164.	0.035	UG/KG	0.06
25	NOT FOUND									
26	92	1394	11:37	3	0.841	A BB	939.	0.061	UG/KG	0.10
27	NOT FOUND									
28	NOT FOUND									
29	164	1497	12:28	3	0.903	A BB	337.	0.069	UG/KG	0.11
30	112	1662	13:51	3	1.003	A BB	501.	0.039	UG/KG	0.06
31	106	1686	14:03	3	1.018	A BB	369.	0.045	UG/KG	0.07
32	106	1711	14:15	3	1.033	A BB	558.	0.059	UG/KG	0.09
33	106	1711	14:15	3	1.033	A BB	558.	0.059	UG/KG	0.09
34	NOT FOUND									
35	NOT FOUND									
36	146	2150	17:55	3	1.298	A BB	424.	0.073	UG/KG	0.11
37	146	2172	18:06	3	1.311	A BB	514.	0.072	UG/KG	0.11
38	146	2256	18:48	3	1.361	A BB	236.	0.056	UG/KG	0.09
39	43	782	6:31	1	0.791	A BB	513.	1.179	UG/KG	1.86
40	76	767	6:23	1	0.776	A BB	701.	0.084	UG/KG	0.13
41	43	954	7:57	2	0.841	A BB	704.	0.679	UG/KG	1.07
42	104	1797	14:58	3	1.084	A BB	345.	0.030	UG/KG	0.05

Quantitation Report File: 890218

Data: 890218.TI
02/02/89 14:40:00
Sample: LAB NO 14218-3 CLIENT ID TRAVEL BLANK 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890218

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	987	8:13	1	1.000	A BB	16503.	10.000	UG/KG	15.90
2	114	1134	9:27	2	1.000	A BB	168050.	10.000	UG/KG	15.90
3	117	1656	13:48	3	1.000	A BB	109472.	10.000	UG/KG	15.90
4	65	1068	8:54	1	1.082	A BB	21809.	9.075	UG/KG	14.43
5	100	1381	11:30	3	0.834	A BB	129390.	9.855	UG/KG	15.67
6	95	1904	15:52	3	1.150	A BB	42218.	10.952	UG/KG	17.41
7	50	587	4:53	1	0.595	A BB	153.	0.019	UG/KG	0.03
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	101	681	5:40	1	0.690	A BB	138.	0.027	UG/KG	0.04
12	NOT FOUND									
13	84	795	6:37	1	0.805	A BB	551.	0.108	UG/KG	0.17
14	NOT FOUND									
15	NOT FOUND									
16	83	998	8:19	1	1.011	A BB	694.	0.095	UG/KG	0.15
17	97	1026	8:33	2	0.905	A BB	275.	0.048	UG/KG	0.08
18	NOT FOUND									
19	78	1079	8:59	2	0.951	A BB	697.	0.028	UG/KG	0.04
20	NOT FOUND									
21	NOT FOUND									
22	130	1177	9:48	2	1.038	A BB	322.	0.049	UG/KG	0.08
23	NOT FOUND									
24	75	1334	11:07	2	1.176	A VB	267.	0.058	UG/KG	0.09
25	75	1433	11:56	2	1.264	A BB	235.	0.076	UG/KG	0.12
26	92	1392	11:36	3	0.841	A BB	970.	0.065	UG/KG	0.10
27	97	1466	12:13	2	1.293	A BB	105.	0.054	UG/KG	0.09
28	NOT FOUND									
29	164	1494	12:27	3	0.902	A BB	274.	0.058	UG/KG	0.09
30	112	1661	13:50	3	1.003	A BB	377.	0.030	UG/KG	0.05
31	106	1685	14:02	3	1.018	A BB	396.	0.050	UG/KG	0.08
32	106	1710	14:15	3	1.033	A BB	612.	0.066	UG/KG	0.11
33	106	1710	14:15	3	1.033	A BB	612.	0.066	UG/KG	0.11
34	NOT FOUND									
35	NOT FOUND									
36	146	2152	17:56	3	1.300	A BB	438.	0.077	UG/KG	0.12
37	146	2169	18:04	3	1.310	A BB	698.	0.100	UG/KG	0.16
38	146	2256	18:48	3	1.362	A VB	439.	0.107	UG/KG	0.17
39	43	781	6:30	1	0.791	A BB	501.	1.177	UG/KG	1.87
40	76	766	6:23	1	0.776	A BB	505.	0.062	UG/KG	0.10
41	43	954	7:57	2	0.841	A BB	576.	0.555	UG/KG	0.88
42	104	1796	14:58	3	1.085	A BB	417.	0.037	UG/KG	0.06

Quantitation Report File: 890220

Data: 890220.TI
02/02/89 15:42:00
Sample: LAB NO 14220-2 CLIENT ID DUPLICATE 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890220

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	987	8:13	1	1.000	A BB	16125.	10.000	UG/KG	16.10
2	114	1135	9:27	2	1.000	A BB	163607.	10.000	UG/KG	16.10
3	117	1657	13:48	3	1.000	A BV	103544.	10.000	UG/KG	16.10
4	65	1069	8:54	1	1.083	A BB	20434.	8.702	UG/KG	14.01
5	100	1381	11:30	3	0.833	A BB	123621.	9.955	UG/KG	16.03
6	95	1906	15:53	3	1.150	A BB	37831.	10.376	UG/KG	16.71
7	50	587	4:53	1	0.595	A BB	232.	0.029	UG/KG	0.05
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	101	680	5:40	1	0.689	A BB	247.	0.049	UG/KG	0.08
12	96	739	6:09	1	0.749	A BB	85.	0.015	UG/KG	0.02
13	84	794	6:37	1	0.804	A BB	504.	0.102	UG/KG	0.16
14	96	828	6:54	1	0.839	A BB	62.	0.010	UG/KG	0.02
15	NOT FOUND									
16	83	998	8:19	1	1.011	A BB	190.	0.027	UG/KG	0.04
17	97	1025	8:32	2	0.903	A BB	292.	0.053	UG/KG	0.09
18	NOT FOUND									
19	78	1080	9:00	2	0.952	A BB	458.	0.019	UG/KG	0.03
20	NOT FOUND									
21	NOT FOUND									
22	130	1178	9:49	2	1.038	A BB	3854.	0.596	UG/KG	0.96
23	NOT FOUND									
24	75	1333	11:06	2	1.174	A BB	143.	0.032	UG/KG	0.05
25	NOT FOUND									
26	92	1393	11:36	3	0.841	A BB	742.	0.052	UG/KG	0.08
27	NOT FOUND									
28	NOT FOUND									
29	164	1496	12:28	3	0.903	A BB	222.	0.050	UG/KG	0.08
30	112	1663	13:51	3	1.004	A BB	209.	0.017	UG/KG	0.03
31	106	1686	14:03	3	1.018	A BB	207.	0.028	UG/KG	0.04
32	106	1710	14:15	3	1.032	A BB	392.	0.045	UG/KG	0.07
33	106	1710	14:15	3	1.032	A BB	392.	0.045	UG/KG	0.07
34	NOT FOUND									
35	NOT FOUND									
36	146	2150	17:55	3	1.298	A BB	336.	0.062	UG/KG	0.10
37	146	2171	18:05	3	1.310	A BB	386.	0.059	UG/KG	0.09
38	146	2255	18:47	3	1.361	A BB	136.	0.035	UG/KG	0.06
39	43	781	6:30	1	0.791	A BB	466.	1.122	UG/KG	1.81
40	76	766	6:23	1	0.776	A BB	444.	0.056	UG/KG	0.09
41	43	954	7:57	2	0.841	A BB	554.	0.548	UG/KG	0.88
42	104	1796	14:58	3	1.084	A BB	201.	0.019	UG/KG	0.03

Quantitation Report File: 890222

ata: 890222.TI
02/02/89 16:46:00
Sample: LAB NO 14220-1 SPIKE VO STD @10 PPB CLIENT ID MW4/O/Z 25 ML PAT
onds.: 35 TO 180 @ 8/MIN
ormula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

MOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890222

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	987	8:13	1	1.000	A BB	17652.	10.000	UG/KG	2.47
2	114	1136	9:28	2	1.000	A BB	176242.	10.000	UG/KG	2.47
3	117	1657	13:48	3	1.000	A BB	114719.	10.000	UG/KG	2.47
4	65	1069	8:54	1	1.083	A BV	21556.	8.386	UG/KG	2.07
5	100	1382	11:31	3	0.834	A BB	134886.	9.804	UG/KG	2.42
6	95	1905	15:52	3	1.150	A BB	43685.	10.814	UG/KG	2.67
7	50	585	4:52	1	0.593	A BB	68856.	7.952	UG/KG	1.97
8	62	599	4:59	1	0.607	A BB	61989.	8.918	UG/KG	2.20
9	94	637	5:18	1	0.645	A BB	44886.	9.062	UG/KG	2.24
10	64	649	5:24	1	0.658	A BB	56026.	9.472	UG/KG	2.34
11	101	680	5:40	1	0.689	A BB	52259.	9.485	UG/KG	2.34
12	96	739	6:09	1	0.749	A BB	61551.	9.998	UG/KG	2.47
13	84	794	6:37	1	0.804	A BB	54002.	9.941	UG/KG	2.46
14	96	829	6:54	1	0.840	A BB	70224.	10.230	UG/KG	2.53
15	63	880	7:20	1	0.892	A BB	122887.	10.336	UG/KG	2.56
16	83	999	8:19	1	1.012	A BB	78454.	10.050	UG/KG	2.48
17	97	1026	8:33	2	0.903	A BB	57911.	9.726	UG/KG	2.40
18	62	1080	9:00	1	1.094	A BB	31947.	9.887	UG/KG	2.44
19	78	1080	9:00	2	0.951	A BB	273435.	10.351	UG/KG	2.56
20	117	1051	8:45	2	0.925	A BB	48786.	9.682	UG/KG	2.39
21	63	1212	10:06	2	1.067	A BB	65737.	10.062	UG/KG	2.49
22	130	1178	9:49	2	1.037	A BB	71320.	10.247	UG/KG	2.53
23	83	1257	10:28	2	1.107	A BB	36423.	9.610	UG/KG	2.38
24	75	1333	11:06	2	1.173	A BB	66240.	13.615	UG/KG	3.37
25	75	1433	11:56	2	1.261	A BB	18344.	5.630	UG/KG	1.39
26	92	1394	11:37	3	0.841	A BB	150555.	9.590	UG/KG	2.37
27	97	1466	12:13	2	1.290	A BB	19802.	9.629	UG/KG	2.38
28	129	1541	12:50	2	1.357	A BB	16869.	9.269	UG/KG	2.29
29	164	1497	12:28	3	0.903	A BB	47078.	9.487	UG/KG	2.35
30	112	1663	13:51	3	1.004	A BB	126051.	9.485	UG/KG	2.34
31	106	1686	14:03	3	1.018	A BB	80352.	9.682	UG/KG	2.39
32	106	1710	14:15	3	1.032	A BB	92665.	9.585	UG/KG	2.37
33	106	1710	14:15	3	1.032	A BB	92665.	9.585	UG/KG	2.37
34	173	1832	15:16	2	1.613	A BB	6296.	9.163	UG/KG	2.27
35	83	1466	12:13	3	0.885	A BB	18367.	9.406	UG/KG	2.33
36	146	2150	17:55	3	1.298	A BB	57701.	9.683	UG/KG	2.39
37	146	2172	18:06	3	1.311	A BB	69894.	9.602	UG/KG	2.37
38	146	2256	18:48	3	1.361	A BB	41351.	9.603	UG/KG	2.37
39	43	781	6:30	1	0.791	A BB	4664.	10.243	UG/KG	2.53
40	76	766	6:23	1	0.776	A BB	82060.	9.383	UG/KG	2.32
41	43	954	7:57	2	0.840	A BB	9266.	8.508	UG/KG	2.10
42	104	1796	14:58	3	1.084	A BB	110686.	9.377	UG/KG	2.32

GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

Case Number:		Laboratory:		Contract:	
Inst ID:	5100	Sens Date:	02/03/89	Sens Time:	9:33:00
Lab ID:	890223	Cali Date:		Analyst:	EL

Data release authorized by: _____

m/z	Ion Abundance Criteria	Spec #1903	
50	15 to 40% of mass 95	16.27	
75	30 to 60% of mass 95	32.17	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	7.21	
173	less than 1% of mass 95	0.80	
174	greater than 50% of mass 95	72.29	
175	5 to 9% of mass 174	5.35	(7.40) 1
176	between 95% and 101% of mass 174	70.84	(98.00) 1
177	5 to 9% of mass 176	4.79	(6.76) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

Quantitation Report File: 890223

ata: 890223.TI
02/03/89 9:33:00
ample: VO STD @15 PPB WITH IS SS STD @10 PPB 25 ML PAT
onds.: 35 TO 180 @ 8/MIN
ormula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: EL Analyst: EL Acct. No.: -

MOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

89 0223

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	986	8:13	1	1.000	A BB	16632.	10.000	UG/KG	1.79
2	114	1134	9:27	2	1.000	A BB	163942.	10.000	UG/KG	1.79
3	117	1655	13:47	3	1.000	A BB	105430.	10.000	UG/KG	1.79
4	65	1068	8:54	1	1.083	A BV	19612.	8.097	UG/KG	1.45
5	100	1380	11:30	3	0.834	A BB	123628.	9.777	UG/KG	1.75
6	95	1903	15:51	3	1.150	A BB	38064.	10.253	UG/KG	1.83
7	50	586	4:53	1	0.594	A BV	78463.	9.617	UG/KG	1.72
8	62	600	5:00	1	0.609	A BB	80909.	12.354	UG/KG	2.21
9	94	638	5:19	1	0.647	A BB	55530.	11.899	UG/KG	2.12
10	64	650	5:25	1	0.659	A BB	69837.	12.531	UG/KG	2.24
11	101	680	5:40	1	0.690	A BB	70145.	13.512	UG/KG	2.41
12	96	739	6:09	1	0.749	A BB	80196.	13.825	UG/KG	2.47
13	84	794	6:37	1	0.805	A BB	68492.	13.381	UG/KG	2.39
14	96	828	6:54	1	0.840	A BB	92836.	14.354	UG/KG	2.56
15	63	879	7:19	1	0.891	A BB	159931.	14.277	UG/KG	2.55
16	83	997	8:18	1	1.011	A BB	105060.	14.283	UG/KG	2.55
17	97	1025	8:32	2	0.904	A BB	81518.	14.718	UG/KG	2.63
18	62	1079	8:59	1	1.094	A BB	43225.	14.197	UG/KG	2.53
19	78	1078	8:59	2	0.951	A BB	351993.	14.325	UG/KG	2.56
20	117	1050	8:45	2	0.926	A BB	70495.	15.040	UG/KG	2.68
21	63	1210	10:05	2	1.067	A BB	85251.	14.028	UG/KG	2.50
22	130	1176	9:48	2	1.037	A BB	94122.	14.537	UG/KG	2.60
23	83	1255	10:27	2	1.107	A BB	50120.	14.217	UG/KG	2.54
24	75	1331	11:05	2	1.174	A BB	89213.	19.713	UG/KG	3.52
25	75	1431	11:55	2	1.262	A BB	26193.	8.641	UG/KG	1.54
26	92	1392	11:36	3	0.841	A BB	206034.	14.280	UG/KG	2.55
27	97	1464	12:12	2	1.291	A BB	25974.	13.577	UG/KG	2.42
28	129	1539	12:49	2	1.357	A BB	24259.	14.329	UG/KG	2.56
29	164	1495	12:27	3	0.903	A BB	68508.	15.022	UG/KG	2.68
30	112	1661	13:50	3	1.004	A BB	172713.	14.141	UG/KG	2.52
31	106	1685	14:02	3	1.018	A BB	111091.	14.565	UG/KG	2.60
32	106	1708	14:14	3	1.032	A BB	129160.	14.537	UG/KG	2.60
33	106	1708	14:14	3	1.032	A BB	129160.	14.537	UG/KG	2.60
34	173	1830	15:15	2	1.614	A BB	9273.	14.508	UG/KG	2.59
35	83	1464	12:12	3	0.885	A BB	23835.	13.282	UG/KG	2.37
36	146	2148	17:54	3	1.298	A BB	80552.	14.708	UG/KG	2.63
37	146	2169	18:04	3	1.311	A BB	98064.	14.659	UG/KG	2.62
38	146	2254	18:47	3	1.362	A BB	56771.	14.346	UG/KG	2.56
39	43	781	6:30	1	0.792	A BB	6427.	14.981	UG/KG	2.67
40	76	766	6:23	1	0.777	A BB	109624.	13.304	UG/KG	2.37
41	43	953	7:56	2	0.840	A BV	13716.	13.538	UG/KG	2.42
42	104	1794	14:57	3	1.084	A BB	155196.	14.306	UG/KG	2.55

Quantitation Report File: 890224

Data: 890224.TI
02/03/89 10:29:00
Sample: BLANK WITH IS SS STD @10 PPB 25 ML PAT
Comds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: EL Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3--DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2--TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890229

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	987	8:13	1	1.000	A BB	16345.	10.000 UG/KG	16.10
2	114	1135	9:27	2	1.000	A BB	160634.	10.000 UG/KG	16.10
3	117	1655	13:47	3	1.000	A BV	100553.	10.000 UG/KG	16.10
4	65	1068	8:54	1	1.082	A BB	19235.	8.081 UG/KG	13.01
5	100	1380	11:30	3	0.834	A BB	120401.	9.984 UG/KG	16.07
6	95	1904	15:52	3	1.150	A BB	35408.	10.000 UG/KG	16.10
7	50	586	4:53	1	0.594	A BB	355.	0.044 UG/KG	0.07
8	62	600	5:00	1	0.608	A BB	115.	0.018 UG/KG	0.03
9	94	638	5:19	1	0.646	A BB	218.	0.048 UG/KG	0.08
10	64	651	5:25	1	0.660	A BB	144.	0.026 UG/KG	0.04
11	101	680	5:40	1	0.689	A BB	230.	0.045 UG/KG	0.07
12	96	740	6:10	1	0.750	A BB	180.	0.032 UG/KG	0.05
13	84	795	6:37	1	0.805	A BB	1000.	0.199 UG/KG	0.32
14	96	828	6:54	1	0.839	A BB	271.	0.043 UG/KG	0.07
15	63	882	7:21	1	0.894	A BB	413.	0.038 UG/KG	0.06
16	83	999	8:19	1	1.012	A BB	895.	0.124 UG/KG	0.20
17	97	1027	8:33	2	0.905	A BB	433.	0.080 UG/KG	0.13
18	62	1079	8:59	1	1.093	A BB	369.	0.123 UG/KG	0.20
19	78	1079	8:59	2	0.951	A BB	1777.	0.074 UG/KG	0.12
20	117	1052	8:46	2	0.927	A BB	214.	0.047 UG/KG	0.08
21	63	1211	10:05	2	1.067	A BB	414.	0.070 UG/KG	0.11
22	130	1178	9:49	2	1.038	A BB	536.	0.084 UG/KG	0.14
23	83	1256	10:28	2	1.107	A BB	280.	0.081 UG/KG	0.13
24	75	1332	11:06	2	1.174	A BB	706.	0.159 UG/KG	0.26
25	75	1432	11:56	2	1.262	A BB	445.	0.150 UG/KG	0.24
26	92	1393	11:36	3	0.842	A BB	2083.	0.151 UG/KG	0.24
27	NOT	FOUND							
28	129	1540	12:50	2	1.357	A BB	198.	0.119 UG/KG	0.19
29	164	1496	12:28	3	0.904	A BB	360.	0.083 UG/KG	0.13
30	112	1661	13:50	3	1.004	A BB	763.	0.065 UG/KG	0.11
31	106	1685	14:02	3	1.018	A BB	507.	0.070 UG/KG	0.11
32	106	1709	14:14	3	1.033	A BB	986.	0.116 UG/KG	0.19
33	106	1709	14:14	3	1.033	A BB	986.	0.116 UG/KG	0.19
34	NOT	FOUND							
35	83	1465	12:12	3	0.885	A BB	240.	0.140 UG/KG	0.23
36	146	2148	17:54	3	1.298	A BB	619.	0.119 UG/KG	0.19
37	146	2170	18:05	3	1.311	A BB	784.	0.123 UG/KG	0.20
38	146	2254	18:47	3	1.362	A BB	527.	0.140 UG/KG	0.22
39	43	782	6:31	1	0.792	A BB	241.	0.573 UG/KG	0.92
40	76	767	6:23	1	0.777	A BB	617.	0.076 UG/KG	0.12
41	43	954	7:57	2	0.841	A BB	609.	0.613 UG/KG	0.99
42	104	1794	14:57	3	1.084	A BB	653.	0.063 UG/KG	0.10

Quantitation Report File: 890226

ata: 890226.TI
02/03/89 11:31:00
Sample: LAB NO 14219-2 CLIENT ID FIELD BLANK 25 ML PAT
onds.: 35 TO 180 @ 8/MIN
ormula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

MOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

890226

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	978	8:09	1	1.000	A BB	17366.	10.000	UG/KG	15.42
2	114	1127	9:23	2	1.000	A BB	164818.	10.000	UG/KG	15.42
3	117	1652	13:46	3	1.000	A BB	100194.	10.000	UG/KG	15.42
4	65	1059	8:49	1	1.083	A BB	20086.	7.942	UG/KG	12.25
5	100	1375	11:27	3	0.832	A BB	119785.	9.968	UG/KG	15.37
6	95	1901	15:50	3	1.151	A BB	34896.	9.891	UG/KG	15.25
7	50	585	4:52	1	0.598	A VB	350.	0.041	UG/KG	0.06
8	NOT FOUND									
9	94	634	5:17	1	0.648	A BB	66.	0.014	UG/KG	0.02
10	64	645	5:22	1	0.660	A BB	61.	0.010	UG/KG	0.02
11	101	674	5:37	1	0.689	A BB	12852.	2.371	UG/KG	3.66
12	NOT FOUND									
13	84	785	6:32	1	0.803	A BB	4640.	0.868	UG/KG	1.34
14	96	818	6:49	1	0.836	A BB	131.	0.019	UG/KG	0.03
15	63	869	7:14	1	0.889	A BB	55.	0.005	UG/KG	0.01
16	83	989	8:14	1	1.011	A BB	509.	0.066	UG/KG	0.10
17	97	1017	8:28	2	0.902	A BB	2590.	0.465	UG/KG	0.72
18	NOT FOUND									
19	78	1070	8:55	2	0.949	A BB	1145.	0.046	UG/KG	0.07
20	NOT FOUND									
21	NOT FOUND									
22	130	1170	9:45	2	1.038	A BB	436.	0.067	UG/KG	0.10
23	NOT FOUND									
24	75	1327	11:03	2	1.177	A BB	224.	0.049	UG/KG	0.08
25	75	1423	11:51	2	1.263	A BB	89.	0.029	UG/KG	0.05
26	92	1387	11:33	3	0.840	A BB	3515.	0.256	UG/KG	0.40
27	NOT FOUND									
28	NOT FOUND									
29	164	1490	12:25	3	0.902	A BB	704.	0.162	UG/KG	0.25
30	112	1656	13:48	3	1.002	A BB	267.	0.023	UG/KG	0.04
31	106	1682	14:01	3	1.018	A BB	539.	0.074	UG/KG	0.11
32	106	1706	14:13	3	1.033	A BB	1276.	0.151	UG/KG	0.23
33	106	1706	14:13	3	1.033	A BB	1276.	0.151	UG/KG	0.23
34	NOT FOUND									
35	NOT FOUND									
36	146	2147	17:53	3	1.300	A BB	319.	0.061	UG/KG	0.09
37	146	2169	18:04	3	1.313	A BB	377.	0.059	UG/KG	0.09
38	146	2253	18:46	3	1.364	A BB	163.	0.043	UG/KG	0.07
39	43	772	6:26	1	0.789	A BB	531.	1.186	UG/KG	1.83
40	76	758	6:19	1	0.775	A BB	636.	0.074	UG/KG	0.11
41	43	944	7:52	2	0.838	A BB	718.	0.705	UG/KG	1.09
42	104	1791	14:55	3	1.084	A BB	521.	0.051	UG/KG	0.08

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-6	Travel Blank 14222-1	25 JAN 89

PARAMETER	01-409-6
B/N,A Ext.Pri.Poll. (EPA-625)	
Date Extracted	01/31/89
Date Analyzed	02/10/89
Dilution Factor, Times 1	1
1,2,4-Trichlorobenzene, ug/L	<10
1,2-Dichlorobenzene, ug/L	<10
1,2-Diphenylhydrazine, ug/L	<10
1,3-Dichlorobenzene, ug/L	<10
1,4-Dichlorobenzene, ug/L	<10
2,4,6-Trichlorophenol, ug/L	<10
2,4-Dichlorophenol, ug/L	<10
2,4-Dimethylphenol, ug/L	<10
2,4-Dinitrotoluene, ug/L	<10
2,4-Dinitrophenol, ug/L	<25
2,6-Dinitrotoluene, ug/L	<10
2-Chloronaphthalene, ug/L	<10
2-Methylnaphthalene, ug/L	<10
2-Methyl Phenol, ug/L	<10
2-Nitrophenol, ug/L	<10
2-Nitroaniline, ug/L	<50
2,4,5-Trichlorophenol, ug/L	<10
2-Chlorophenol, ug/L	<10
2-Methyl-4,6-dinitrophenol, ug/L	<50
3,3'-Dichlorobenzidine, ug/L	<10
3-Nitroaniline, ug/L	<50
4-Bromophenylphenylether, ug/L	<10
4-Chloro-3-methylphenol, ug/L	<10

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-6	Travel Blank 14222-1	25 JAN 89

PARAMETER	01-409-6
4-Chlorophenylphenylether, ug/L	<10
4-Chloroaniline, ug/L	<20
4-Methyl Phenol, ug/L	<10
4-Nitrophenol, ug/L	<25
4-Nitroaniline, ug/L	<50
Acenaphthene, ug/L	<10
Acenaphthylene, ug/L	<10
Aniline, ug/L	<20
Anthracene, ug/L	<10
Bis(2-ethylhexyl)phthalate, ug/L	<10
Benzidine, ug/L	<40
Benzoic Acid, ug/L	<50
Benzyl Alcohol, ug/L	<20
Bis(2-chloroethyl) Ether, ug/L	<10
Bis(2-Chloroisopropyl)ether, ug/L	<10
Bis(2-chloroethoxy)methane, ug/L	<10
Benzo(a)anthracene, ug/L	<10
Benzo(a)pyrene, ug/L	<10
Benzo(b)fluoranthene, ug/L	<10
Benzo(g,h,i)perylene, ug/L	<10
Benzo(k)fluoranthene, ug/L	<10
Butylbenzylphthalate, ug/L	<10
Chrysene, ug/L	<10
Di-n-octylphthalate, ug/L	<10
Dibenzo(a,h)anthracene, ug/L	<10
Dibutylphthalate, ug/L	<50
Diethylphthalate, ug/L	<10

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-6	Travel Blank 14222-1	25 JAN 89

PARAMETER	01-409-6
Dimethylphthalate, ug/L	<25
Dibenzofuran, ug/L	<10
Fluorene, ug/L	<10
Fluoranthene, ug/L	<10
Hexachlorobenzene, ug/L	<10
Hexachlorobutadiene, ug/L	<10
Hexachlorocyclopentadiene, ug/L	<10
Hexachloroethane, ug/L	<10
Indeno(1,2,3-c,d)Pyrene, ug/L	<10
Isophorone, ug/L	<10
N-Nitrosodi-n-propylamine, ug/L	<40
N-Nitrosodimethylamine, ug/L	<80
N-Nitrosodiphenylamine, ug/L	<10
Naphthalene, ug/L	<10
Nitrobenzene, ug/L	<10
Pentachlorophenol, ug/L	<10
Phenanthrene, ug/L	<10
Phenol, ug/L	<10
Pyrene, ug/L	<10

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-7	MW1/P/2 14221 BC/QC SPK	25 JAN 89

PARAMETER	01-409-7
B/N,A Ext.Pri.Poll. (EPA-625)	
Date Extracted	01/31/89
Date Analyzed	02/10/89
Dilution Factor, Times 1	1
1,2,4-Trichlorobenzene, Percent	42
1,4-Dichlorobenzene, Percent	36
2,4-Dinitrotoluene, Percent	36
2-Chlorophenol, Percent	55
4-Chloro-3-methylphenol, Percent	49
4-Nitrophenol, Percent	19
Acenaphthene, Percent	52
N-Nitrosodi-n-propylamine, Percent	64
Pentachlorophenol, Percent	9
Phenol, Percent	45
Pyrene, Percent	56
Other B/N,A Ext.Pri.Poll. (EPA-625)	---

BROWN AND CALDWELL LABORATORIES

3373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-8	MW1/P/2 14221 BC/QC DUP-SPK	25 JAN 89

PARAMETER	01-409-8
B/N,A Ext.Pri.Poll. (EPA-625)	
Date Extracted	01/31/89
Date Analyzed	02/10/89
Dilution Factor, Times 1	1
1,2,4-Trichlorobenzene, Percent	36
1,4-Dichlorobenzene, Percent	32
2,4-Dinitrotoluene, Percent	36
2-Chlorophenol, Percent	62
4-Chloro-3-methylphenol, Percent	43
4-Nitrophenol, Percent	28
Acenaphthene, Percent	44
N-Nitrosodi-n-propylamine, Percent	52
Pentachlorophenol, Percent	15
Phenol, Percent	55
Pyrene, Percent	54
Other B/N,A Ext.Pri.Poll. (EPA-625)	---

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
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LOG NO: P89-01-409

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Chris Thompson
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853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, REAGENT WATER SAMPLES	DATE SAMPLED
01-409-9	Laboratory Control Standard	

PARAMETER	01-409-9
B/N,A Ext.Pri.Poll. (EPA-625)	
Date Extracted	01/31/89
Date Analyzed	02/10/89
Dilution Factor, Times 1	1
1,2,4-Trichlorobenzene, Percent	69
1,2-Dichlorobenzene, Percent	55
1,2-Diphenylhydrazine, Percent	80
1,3-Dichlorobenzene, Percent	49
1,4-Dichlorobenzene, Percent	53
2,4,6-Trichlorophenol, Percent	61
2,4-Dichlorophenol, Percent	150
2,4-Dimethylphenol, Percent	70
2,4-Dinitrotoluene, Percent	74
2,4-Dinitrophenol, Percent	0
2,6-Dinitrotoluene, Percent	83
2-Chloronaphthalene, Percent	68
2-Methylnaphthalene, Percent	37
2-Methyl Phenol, Percent	41
2-Nitrophenol, Percent	77
2-Nitroaniline, Percent	33
2,4,5-Trichlorophenol, Percent	53
2-Chlorophenol, Percent	59
2-Methyl-4,6-dinitrophenol, Percent	18
3,3'-Dichlorobenzidine, Percent	28
3-Nitroaniline, Percent	22
4-Bromophenylphenylether, Percent	83
4-Chloro-3-methylphenol, Percent	58

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
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LOG NO: P89-01-409

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Reported: 13 FEB 89

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Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, REAGENT WATER SAMPLES	DATE SAMPLED
01-409-9	Laboratory Control Standard	

PARAMETER	01-409-9
4-Chlorophenylphenylether, Percent	75
4-Chloroaniline, Percent	27
4-Methyl Phenol, Percent	71
4-Nitrophenol, Percent	28
4-Nitroaniline, Percent	4
Acenaphthene, Percent	79
Acenaphthylene, Percent	79
Aniline, Percent	28
Anthracene, Percent	80
Bis(2-ethylhexyl)phthalate, Percent	140
Benzidine, Percent	0
Benzoic Acid, Percent	7
Benzyl Alcohol, Percent	41
Bis(2-chloroethyl) Ether, Percent	69
Bis(2-Chloroisopropyl)ether, Percent	80
Bis(2-chloroethoxy)methane, Percent	83
Benzo(a)anthracene, Percent	81
Benzo(a)pyrene, Percent	78
Benzo(b)fluoranthene, Percent	88
Benzo(g,h,i)perylene, Percent	72
Benzo(k)fluoranthene, Percent	69
Butylbenzylphthalate, Percent	100
Chrysene, Percent	84
Di-n-octylphthalate, Percent	100
Dibenzo(a,h)anthracene, Percent	73
Dibutylphthalate, Percent	71
Diethylphthalate, Percent	12

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Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, REAGENT WATER SAMPLES	DATE SAMPLED
01-409-9	Laboratory Control Standard	

PARAMETER	01-409-9
Dimethylphthalate, Percent	6
Dibenzofuran, Percent	33
Fluorene, Percent	76
Fluoranthene, Percent	70
Hexachlorobenzene, Percent	100
Hexachlorobutadiene, Percent	63
Hexachlorocyclopentadiene, Percent	49
Hexachloroethane, Percent	47
Indeno(1,2,3-c,d)Pyrene, Percent	70
Isophorone, Percent	89
N-Nitrosodi-n-propylamine, Percent	90
N-Nitrosodimethylamine, Percent	71
N-Nitrosodiphenylamine, Percent	82
Naphthalene, Percent	75
Nitrobenzene, Percent	91
Pentachlorophenol, Percent	18
Phenanthrene, Percent	82
Phenol, Percent	55
Pyrene, Percent	100

BROWN AND CALDWELL LABORATORIES

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FGL Environmental
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Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
01-409-10	Reagent Blank	

PARAMETER	01-409-10
B/N,A Ext.Pri.Poll. (EPA-625)	
Date Extracted	01/31/89
Date Analyzed	02/10/89
Dilution Factor, Times 1	1
1,2,4-Trichlorobenzene, ug/L	<10
1,2-Dichlorobenzene, ug/L	<10
1,2-Diphenylhydrazine, ug/L	<10
1,3-Dichlorobenzene, ug/L	<10
1,4-Dichlorobenzene, ug/L	<10
2,4,6-Trichlorophenol, ug/L	<10
2,4-Dichlorophenol, ug/L	<10
2,4-Dimethylphenol, ug/L	<10
2,4-Dinitrotoluene, ug/L	<10
2,4-Dinitrophenol, ug/L	<25
2,6-Dinitrotoluene, ug/L	<10
2-Chloronaphthalene, ug/L	<10
2-Methylnaphthalene, ug/L	<10
2-Methyl Phenol, ug/L	<10
2-Nitrophenol, ug/L	<10
2-Nitroaniline, ug/L	<50
2,4,5-Trichlorophenol, ug/L	<10
2-Chlorophenol, ug/L	<10
2-Methyl-4,6-dinitrophenol, ug/L	<50
3,3'-Dichlorobenzidine, ug/L	<10
3-Nitroaniline, ug/L	<50
4-Bromophenylphenylether, ug/L	<10
4-Chloro-3-methylphenol, ug/L	<10

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
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FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
01-409-10	Reagent Blank	

PARAMETER	01-409-10
4-Chlorophenylphenylether, ug/L	<10
4-Chloroaniline, ug/L	<20
4-Methyl Phenol, ug/L	<10
4-Nitrophenol, ug/L	<25
4-Nitroaniline, ug/L	<50
Acenaphthene, ug/L	<10
Acenaphthylene, ug/L	<10
Aniline, ug/L	<20
Anthracene, ug/L	<10
Bis(2-ethylhexyl)phthalate, ug/L	<10
Benzidine, ug/L	<40
Benzoic Acid, ug/L	<50
Benzyl Alcohol, ug/L	<20
Bis(2-chloroethyl) Ether, ug/L	<10
Bis(2-Chloroisopropyl)ether, ug/L	<10
Bis(2-chloroethoxy)methane, ug/L	<10
Benzo(a)anthracene, ug/L	<10
Benzo(a)pyrene, ug/L	<10
Benzo(b)fluoranthene, ug/L	<10
Benzo(g,h,i)perylene, ug/L	<10
Benzo(k)fluoranthene, ug/L	<10
Butylbenzylphthalate, ug/L	<10
Chrysene, ug/L	<10
Di-n-octylphthalate, ug/L	<10
Dibenzo(a,h)anthracene, ug/L	<10
Dibutylphthalate, ug/L	<50
Diethylphthalate, ug/L	<10

BROWN AND CALDWELL LABORATORIES

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FAX: (818) 795-8579

LOG NO: P89-01-409

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Reported: 13 FEB 89

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FGL Environmental
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Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
01-409-10	Reagent Blank	

PARAMETER	01-409-10
Dimethylphthalate, ug/L	<25
Dibenzofuran, ug/L	<10
Fluorene, ug/L	<10
Fluoranthene, ug/L	<10
Hexachlorobenzene, ug/L	<10
Hexachlorobutadiene, ug/L	<10
Hexachlorocyclopentadiene, ug/L	<10
Hexachloroethane, ug/L	<10
Indeno(1,2,3-c,d)Pyrene, ug/L	<10
Isophorone, ug/L	<10
N-Nitrosodi-n-propylamine, ug/L	<40
N-Nitrosodimethylamine, ug/L	<80
N-Nitrosodiphenylamine, ug/L	<10
Naphthalene, ug/L	<10
Nitrobenzene, ug/L	<10
Pentachlorophenol, ug/L	<10
Phenanthrene, ug/L	<10
Phenol, ug/L	<10
Pyrene, ug/L	<10

Jeffrey A. Erion, Laboratory Manager

APPENDIX I

LABORATORY ANALYTICAL REPORTS AND CHROMATOGRAMS

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: 14318

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - MW1

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Sample Description - MW1
Date Sampled: January 25, 1989

	pH	EC, umhos/cm
MW1/A/2/1	7.4	576
MW1/A/2/2	7.5	567
MW1/A/2/3	7.5	585
MW1/A/2/4	7.5	559

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: 14302

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - MW2

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Sample Description - MW2
Date Sampled: January 24, 1989

	pH	EC, umhos/cm
MW2/A/2/1	7.0	3897
MW2/A/2/2	7.0	3897
MW2/A/2/3	7.0	3897
MW2/A/2/4	7.0	3852

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: 14319

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - MW3

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Sample Description - MW3
Date Sampled: January 25, 1989

	pH	EC, umhos/cm
MW3/A/2/1	7.6	669
MW3/A/2/2	7.6	681
MW3/A/2/3	7.9	624
MW3/A/2/4	7.8	681

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: 14320

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - MW4

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Sample Description - MW4
Date Sampled: January 25, 1989

	pH	EC, umhos/cm
MW4/A/2/1	7.5	520
MW4/A/2/2	7.6	513
MW4/A/2/3	7.5	520
MW4/A/2/4	7.6	527

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TOTAL ORGANIC HALOGEN IN WATER
EPA METHOD 9020

February 14, 1989
Lab No. 14321

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW1
Sampled By: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Sample Description	ug/l	Detection Limit ug/l	MCL
MW1/C/2/1	ND	100	500
MW1/C/2/2	ND	100	500
MW1/C/2/3	ND	100	500
MW1/C/2/4	ND	100	500

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green
Laboratory Director

Jeanine Surber, B.S.
Environmental Biologist

CG/JS:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TOTAL ORGANIC HALOGEN IN WATER
EPA METHOD 9020

February 14, 1989
Lab No. 14304

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW2
Sampled By: Chris Thompson, Wenck
Date Sampled: January 24, 1989
Date Received: January 24, 1989 Date Analyzed: February 1, 1989

REPORT OF ANALYSIS

Sample Description	ug/l	Detection Limit ug/l	MCL
MW2/C/2/1	120*	100	500
MW2/C/2/2	110*	100	500
MW2/C/2/3	130*	100	500
MW2/C/2/4	120*	100	500

* = Breakthrough of sample into backup column during isolation with activated carbon. Result may not be reliable.

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green
Laboratory Director

Jeanine Surber, B.S.
Environmental Biologist

CG/JS:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TOTAL ORGANIC HALOGEN IN WATER
EPA METHOD 9020

February 14, 1989
Lab No. 14304

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW3
Sampled By: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Sample Description	ug/l	Detection Limit ug/l	MCL
MW3/C/2/1	ND	100	500
MW3/C/2/2	ND	100	500
MW3/C/2/3	ND	100	500
MW3/C/2/4	ND	100	500

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green
Laboratory Director

Jeanine Surber, B.S.
Environmental Biologist

CG/JS:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TOTAL ORGANIC HALOGEN IN WATER
EPA METHOD 9020

February 14, 1989
Lab No. 14323

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4
Sampled By: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Sample Description	ug/l	Detection Limit ug/l	MCL
MW4/C/2/1	ND	100	500
MW4/C/2/2	ND	100	500
MW4/C/2/3	ND	100	500
MW4/C/2/4	ND	100	500
Field Blank 1	2.7	-	-
Travel Blank 2	0.0	-	-

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green
Laboratory Director

Jeanine Surber, B.S.
Environmental Biologist

CG/JS:mlh

TOX-AOX NO.5 14321-1
SAMPLE 30.00 ml
COUNTS 0.325 µgCl
0.272 µgCl
BLANK 0.199 µgCl
CONCN. 6.6 ppb

TOX-AOX NO.6 14321-2
SAMPLE 30.00 ml
COUNTS 0.288 µgCl
0.566 µgCl
BLANK 0.199 µgCl
CONCN. 15.2 ppb

TOX-AOX NO.7 14321-3
SAMPLE 30.00 ml
COUNTS 0.399 µgCl
0.251 µgCl
BLANK 0.199 µgCl
CONCN. 8.4 ppb

TOX-AOX NO.8 14321-4
SAMPLE 30.00 ml
COUNTS 0.366 µgCl
0.329 µgCl
BLANK 0.199 µgCl
CONCN. 9.9 ppb

TOX-AOX NO.9 14322-1
SAMPLE 30.00 ml
COUNTS 0.389 µgCl
0.282 µgCl
BLANK 0.199 µgCl
CONCN. 9.1 ppb

TOX-AOX NO.10 14322-2
SAMPLE 30.00 ml
COUNTS 0.302 µgCl
0.347 µgCl
BLANK 0.199 µgCl
CONCN. 8.4 ppb

EOW : 35.45
END.P : 295.8 mV
SENS : 1.0 mV
GAIN-1 : 1.62
GAIN-2 : 4.00
GAIN-3 : 4.00
SMPL : 30.00
DLY-1 : 2.0 min
DLY-2 : 0.3 min
TEMP-1 : 850 °C
TEMP-2 : 950 °C
TEMP-3 : 25 °C
FACTOR : 1.000
BL : 0.199 µg
CURRENT: 1.0 mA

S.NO. : 11
EOW : 35.45
END.P : 296.6 mV
SENS : 1.0 mV
GAIN-1 : 1.43 .
GAIN-2 : 3.30
GAIN-3 : 6.74
SMPL : 30.00
DLY-1 : 2.0 min
DLY-2 : 0.3 min
TEMP-1 : 850 °C
TEMP-2 : 950 °C
TEMP-3 : 25 °C
FACTOR : 1.000
BL : 0.199 µg
CURRENT: 1.0 mA

TOX-AOX-2 MODE
INPUT SMPL

TOX-AOX NO.1
SAMPLE 30.00 ml
COUNTS -0.091 µgCl

TOX-AOX-2 MODE
INPUT SMPL

TOX-AOX NO.12 14322-4
SAMPLE 30.00 ml
COUNTS 0.307 µgCl
0.330 µgCl
BLANK 0.199 µgCl
CONCN. 8.0 ppb

TOX-AOX NO.13 14323-1
SAMPLE 30.00 ml
COUNTS 0.358 µgCl
0.275 µgCl
BLANK 0.199 µgCl
CONCN. 7.8 ppb

TOX-AOX NO.14 14323-2
SAMPLE 30.00 ml
COUNTS 0.345 µgCl
0.270 µgCl
BLANK 0.199 µgCl

TOX-AOX NO.11 14322-3
SAMPLE 30.00 ml
COUNTS 0.392 µgCl
0.316 µgCl
BLANK 0.199 µgCl
CONCN. 10.3 ppb

TOX-AOX NO.15 14323-3
SAMPLE 30.00 ml
COUNTS 0.251 µgCl
0.464 µgCl
BLANK 0.199 µgCl
CONCN. 10.6 ppb

TOX-AOX NO.16 14323-4
SAMPLE 30.00 ml
COUNTS 0.436 µgCl
0.254 µgCl
BLANK 0.199 µgCl
CONCN. 9.7 ppb

TOX-AOX NO.17 FIELD BLANK 1
SAMPLE 30.00 ml
COUNTS 0.279 µgCl
0.198 µgCl
BLANK 0.199 µgCl
CONCN. 2.7 ppb

TOX-AOX NO.18 TRAVEL BLANK 2
SAMPLE 30.00 ml
COUNTS 0.183 µgCl
0.198 µgCl
BLANK 0.199 µgCl
CONCN. 0.0 ppb

TOX-AOX NO.19 BLANK SPIKE
SAMPLE 30.00 ml
COUNTS 3.013 µgCl
0.030 µgCl
BLANK 0.199 µgCl
CONCN. 93.8 ppb

TOX-AOX NO.20 BLANK SPIKE DUP
SAMPLE 30.00 ml
COUNTS 2.816 µgCl
0.115 µgCl
BLANK 0.199 µgCl
CONCN. 87.2 ppb

BERMITE TOX
2-2-89

```
S.NO.   :    1001
EQW     :   35.45
END.P   :   294.8   mV
SENS    :     1.0   mV
GAIN-1  :    1.35
GAIN-2  :    3.17
GAIN-3  :    6.45
SMPL    :   30.00
DLY-1   :     2.0   min
DLY-2   :     0.3   min
TEMP-1  :     850   °C
TEMP-2  :     950   °C
TEMP-3  :      25   °C
FACTOR  :   1.000
BL      :   0.246   µg
CURRENT:     1.0   mA
```

```
S.NO.   :    1001
EQW     :   35.45
END.P   :   291.8   mV
SENS    :     1.0   mV
GAIN-1  :    1.47
GAIN-2  :    3.62
GAIN-3  :    6.85
SMPL    :   30.00
DLY-1   :     2.0   min
DLY-2   :     0.3   min
TEMP-1  :     850   °C
TEMP-2  :     950   °C
TEMP-3  :      25   °C
FACTOR  :   1.000
BL      :   0.246   µg
CURRENT:     1.0   mA
```

```
TSX-CAL MODE
INPUT THEOR. VALUE

TSX-CAL NO.1
 THEOR.   11.100 µgCl
 COUNTS   10.683 µgCl
 FACTOR    0.962


TOX-BLANK MODE

TOX-BLNK NO.1
 COUNTS    0.138 µgCl

TOX-BLNK NO.2
 COUNTS    0.260 µgCl


AVERAGE    0.199 µgCl
```

```
TOX-AOX-2 MODE
INPUT SMPL

TOX-AOX NO.1 14304-1
 SAMPLE.   30.00   ml
 COUNTS    3.177 µgCl
           0.601 µgCl
 BLANK     0.199 µgCl
 CONCN.    112.7  ppb

TOX-AOX NO.2 14304-2
 SAMPLE.   30.00   ml
 COUNTS    3.241 µgCl
           0.519 µgCl
 BLANK     0.199 µgCl
 CONCN.    112.1  ppb

TOX-AOX NO.3 14304-3
 SAMPLE.   30.00   ml
 COUNTS    2.953 µgCl
           0.598 µgCl
 BLANK     0.199 µgCl
 CONCN.    105.1  ppb

TOX-AOX NO.4 14304-4
 SAMPLE    30.00   ml
 COUNTS    3.030 µgCl
           0.693 µgCl
 BLANK     0.199 µgCl
 CONCN.    110.2  ppb
```

```
S.NO.   :       5
EQW     :   35.45
END.P   :   296.7   mV
SENS    :     1.0   mV
GAIN-1  :    1.69
GAIN-2  :    3.64
GAIN-3  :    3.64
SMPL    :   30.00
DLY-1   :     2.0   min
DLY-2   :     0.3   min
TEMP-1  :     850   °C
TEMP-2  :     950   °C
TEMP-3  :      25   °C
FACTOR  :   1.000
BL      :   0.199   µg
CURRENT:     1.0   mA
```

```
S.NO.   :       5
EQW     :   35.45
END.P   :   296.3   mV
SENS    :     1.0   mV
GAIN-1  :    1.65
GAIN-2  :    3.63
GAIN-3  :    6.69
SMPL    :   30.00
DLY-1   :     2.0   min
DLY-2   :     0.3   min
TEMP-1  :     850   °C
TEMP-2  :     950   °C
TEMP-3  :      25   °C
FACTOR  :   1.000
BL      :   0.199   µg
CURRENT:     1.0   mA
```

```
TOX-AOX-2 MODE
INPUT SMPL   RERUN

TOX-AOX NO.1 14304-1
 SAMPLE    30.00   ml
 COUNTS    3.619 µgCl
           0.648 µgCl
 BLANK     0.199 µgCl
 CONCN.    129.0  ppb

TOX-AOX NO.2 14304-2
 SAMPLE    30.00   ml
 COUNTS    2.961 µgCl
           0.702 µgCl
 BLANK     0.199 µgCl
 CONCN.    108.8  ppb

TOX-AOX NO.3 14304-3
 SAMPLE    30.00   ml
 COUNTS    4.394 µgCl
           0.704 µgCl
 BLANK     0.199 µgCl
 CONCN.    156.7  ppb

TOX-AOX NO.4 14304-4
 SAMPLE    30.00   ml
 COUNTS    3.776 µgCl
           0.796 µgCl
 BLANK     0.199 µgCl
```

BERMITE TOX
2-2-89
RL

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

March 4, 1989

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: TOC ANALYSES

Attached are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

Please note that the analyses was performed by Brown and Caldwell Laboratories, Inc.

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

J.G. Patel

J.G. Patel, M.S.
Environmental Chemist

JP:mlh

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-408-1	MW4/B/2/1 14214	25 JAN 89
01-408-2	MW4/B/2/2 14214-1	25 JAN 89
01-408-3	MW4/B/2/3 14214-2	25 JAN 89
01-408-4	MW4/B/2/4 14214-3	25 JAN 89
01-408-5	Travel Blank 14213-4	25 JAN 89

PARAMETER	01-408-1	01-408-2	01-408-3	01-408-4	01-408-5
Total Organic Carbon (TOC), mg/L	<3	<3	<3	<3	<3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-408-6	MW1/B/2/1 14212	25 JAN 89
01-408-7	MW1/B/2/2 14212-1	25 JAN 89
01-408-8	MW1/B/2/3 14212-2	25 JAN 89
01-408-9	MW1/B/2/4 14212-3	25 JAN 89
01-408-10	MW2/B/2/1 14303-1	24 JAN 89

PARAMETER	01-408-6	01-408-7	01-408-8	01-408-9	01-408-10
Total Organic Carbon (TOC), mg/L	<3	5	<3	<3	<3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-408-11	MW2/B/2/2 14303-2	24 JAN 89
01-408-12	MW2/B/2/3	24 JAN 89
01-408-13	MW2/B/2/4	24 JAN 89
01-408-14	MW3/B/2/1 14213	25 JAN 89
01-408-15	MW3/B/2/2 14213-1	25 JAN 89

PARAMETER	01-408-11	01-408-12	01-408-13	01-408-14	01-408-15
Total Organic Carbon (TOC), mg/L	4	<3	<3	<3	<3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-408

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-408-16	MW3/B/2/3 14213-2	25 JAN 89
01-408-17	MW3/B/2/4 14213-3	25 JAN 89
01-408-18	Field Blank 14214-4	25 JAN 89

PARAMETER	01-408-16	01-408-17	01-408-18
Total Organic Carbon (TOC), mg/L	<3	<3	3

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: Listed Below

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - TOTAL METALS

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Lab Number -	14346	14310	14347	14348	14346/Dup	14346/Spike
Date Sampled -	1/25/89	1/24/89	1/25/89	1/25/89	1/25/89	1/25/89
Sample Description -	MW1/J/2	MW2/J/2	MW3/J/2	MW4/J/2	MW1/J/2	MW1/J/2
Antimony (EPA 7041)	*100	*100	*100	*100	*100	102%
Arsenic (EPA 7060)	* 10	* 10	* 10	* 10	* 10	102%
Barium (EPA 6010)	*100	600	*100	*100	*100	97%
Cadmium (EPA 7131)	* 1	* 1	* 1	* 1	* 1	119%
Chromium (EPA 7191)	* 10	* 10	* 10	19	* 10	116%
Copper (EPA 7210)	* 50	* 50	* 50	* 50	* 50	102%
Lead (EPA 7421)	* 10	* 10	* 10	* 10	* 10	101%
Mercury (EPA 7470)	* 1	* 1	* 1	* 1	**109%	112%
Selenium (EPA 7740)	* 5	* 5	* 5	* 5	* 5	74%
Thallium (EPA 7841)	*100	*100	*100	*100	*100	36%

* = Less than
** = Duplicate Spike

ug/L = ppb

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: Listed Below

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - DISSOLVED METALS

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Lab Number -	14349	14311	14350	14224	14349/Dup	14349/Spike
Date Sampled -	1/25/89	1/24/89	1/25/89	1/25/89	1/25/89	1/25/89
Sample Description -	MW1/K/2	MW2/K/2	MW3/K/2	MW4/K/2	MW1/K/2	MW1/K/2
Antimony (EPA 7041)	*100	*100	*100	*100	*100	106%
Arsenic (EPA 7060)	* 10	* 10	* 10	* 10	* 10	102%
Barium (EPA 6010)	*100	600	*100	*100	*100	99%
Cadmium (EPA 7131)	* 1	* 1	* 1	* 1	* 1	131%
Chromium (EPA 7191)	* 10	* 10	* 10	* 10	* 10	122%
Copper (EPA 7210)	* 50	* 50	* 50	* 50	* 50	101%
Lead (EPA 7421)	* 10	* 10	* 10	* 10	* 10	115%
Mercury (EPA 7470)	* 1	* 1	* 1	* 1	**109%	112%
Selenium (EPA 7740)	* 5	* 5	* 5	* 5	* 5	69%
Thallium (EPA 7841)	*100	*100	*100	* 100	*100	47%

* = Less than
** = Duplicate Spike

ug/L = ppb

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: Listed Below

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - DISSOLVED SILVER

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Lab Number -	14330	14313	14331	14332	14330/Dup	14330/Spike
Date Sampled -	1/25/89	1/24/89	1/25/89	1/25/89	1/25/89	1/25/89
Sample Description -	MW1/M/2	MW2/M/2	MW3/M/2	MW4/M/2	MW1/M/2	MW1/M/2
Silver, ug/L EPA Method 7761	*10	*10	*10	*10	*10	110%

* = Less than
ug/L = ppb

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: Listed Below

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - TOTAL SILVER

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Lab Number -	14327	14312	14328	14329	14327/Dup	14327/Spike
Date Sampled -	1/25/89	1/24/89	1/25/89	1/25/89	1/25/89	1/25/89
Sample Description -	MW1/L/2	MW2/L/2	MW3/L/2	MW4/L/2	MW1/L/2	MW1/L/2
Silver, ug/L EPA Method 7761	*10	*10	*10	*10	*10	105%

* = Less than
ug/L = ppb

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14215-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW1/D/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

REPORT OF ANALYSIS

Parameter	Test Results mg/l	Detection Limit mg/l	MCL mg/l
Endrin	ND	0.00001	0.0002
Lindane	ND	0.0004	0.004
Methoxychlor	ND	0.01	0.1
Toxaphene	ND	0.0005	0.005
2,4-D	ND	0.01	0.1
2,4,5-TP Silvex	ND	0.001	0.01

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan

Kim Phan, B.S.
Environmental Chemist

Eric Lu

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14305-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW2/D/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24, 1989
Date Received: January 24, 1989

REPORT OF ANALYSIS

Parameter	Test Results mg/l	Detection Limit mg/l	MCL mg/l
Endrin	ND	0.00001	0.0002
Lindane	ND	0.0004	0.004
Methoxychlor	ND	0.01	0.1
Toxaphene	ND	0.0005	0.005
2,4-D	ND	0.01	0.1
2,4,5-TP Silvex	ND	0.001	0.01

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan, B.S.
Environmental Chemist

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14216

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW3/D/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

REPORT OF ANALYSIS

Parameter	Test Results mg/l	Detection Limit mg/l	MCL mg/l
Endrin	ND	0.00001	0.0002
Lindane	ND	0.0004	0.004
Methoxychlor	ND	0.01	0.1
Toxaphene	ND	0.0005	0.005
2,4-D	ND	0.01	0.1
2,4,5-TP Silvex	ND	0.001	0.01

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan

Kim Phan, B.S.
Environmental Chemist

Eric Lu

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

TITLE 22 ORGANIC CHEMICALS

February 14, 1989
Lab No. 14217-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4/D/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

REPORT OF ANALYSIS

Parameter	Test Results mg/l	Detection Limit mg/l	MCL mg/l
Endrin	ND	0.00001	0.0002
Lindane	ND	0.0004	0.004
Methoxychlor	ND	0.01	0.1
Toxaphene	ND	0.0005	0.005
2,4-D	ND	0.01	0.1
2,4,5-TP Silvex	ND	0.001	0.01

ND = Not detected at or above the concentration of the detection limit.

mg/l = ppm

Analysis performed in accordance with EPA method 608 Organochlorine Pesticides and PCB's, and Standard Methods 509B Chlorinated Phenoxy Acid Herbicides by Gas Chromotography

Very truly yours,
FGL ENVIRONMENTAL, INC.

Kim Phan

Kim Phan, B.S.
Environmental Chemist

Eric Lu

Eric Lu, Ph.D.
Environmental Chemist

KP/EL:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

WENCK ... INC.

January 30, 1989
Lab No.: 14324

FEB 2 1989

RE: BACTERIOLOGICAL ANALYSIS

Client: Bermite Division of Whittaker

Address: 22116 West Soledad Canyon Road
Saugus, California 91350

Date Collected: January 25, 1989

Collected By: Chris Thompson/Wenck

TYPE OF SAMPLE[2]	REASON FOR TEST[3]
1 Source (Well,etc)	A Routine
2 Distribution System	B Recheck
3 Waste Water	C Special

Sample No.	Time Coll.	Set-up Time	Sampling Point	[2]	[3]	Presumptive 24 Hr.	Presumptive 48 Hr.	Confirmed 24 Hr.	Confirmed 48 Hr.	Number of Positive Tubes MPN/100 ml Coliform	Fecal
1	1010-1/25	4:49P	MW1/F/2	1	C	0	0	-	-	*2.2	

Note: The analysis of the bacteriological content of this water indicates that sample 1 meets the public health standards for drinking water.

Remarks: All analyses done by "Standard Methods", 16th Edition, APHA.

* = less than
** = greater than

Date Started: January 25, 1989
Required Notification:
Date Notified:

Date Completed: January 27, 1989
None: X
Person Notified:

FGL ENVIRONMENTAL

By Raquel R. Nelson
Raquel Nelson

RRN:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

January 30, 1989
Lab No.: 14326

RE: BACTERIOLOGICAL ANALYSIS

Client: Bermite Division of Whittaker

Address: 22116 West Soledad Canyon Road
Saugus, California 91350

Date Collected: January 25, 1989

Collected By: Chris Thompson/Wenck

TYPE OF SAMPLE[2]	REASON FOR TEST[3]
1 Source (Well,etc)	A Routine
2 Distribution System	B Recheck
3 Waste Water	C Special

Sample No.	Time Coll.	Set-up Time	Sampling Point	[2]	[3]	Presumptive 24 Hr.	Presumptive 48 Hr.	Confirmed 24 Hr.	Confirmed 48 Hr.	Number of Positive Tubes MPN/100 ml Coliform	Fecal
1	1145-1/25	4:55P	MW4/F/2	1	C	0	0	-	-	*2.2	

Note: The analysis of the bacteriological content of this water indicates that sample 1 meets the public health standards for drinking water.

Remarks: All analyses done by "Standard Methods", 16th Edition, APHA.

* = less than
** = greater than

Date Started: January 25, 1989
Required Notification:
Date Notified:

Date Completed: January 27, 1989
None: X
Person Notified:

FGL ENVIRONMENTAL

By Raquel R. Nelson
Raquel Nelson

RRN:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

March 1, 1989
Lab. No. 14336

Bermite Division of Whittaker
22116 West Soledad Canyon Rd.
Saugus, CA 91350

Attn: Glen Abdun Nur

RE: WATER ANALYSIS

Presenting results of analysis performed on your water sample received January 25, 1989. The sample has been described, as received, along with the data.

DATA

MW1/E/2, Sampled by Chris Thompson, 1/25/89, 1010

	pC/Liter
Gross Alpha	3 ± 2
Gross Beta	0.7 ± 2
Total Radium	*1.0 ± 1.0

* = less than

Gross Beta values that are less than 1 picoCurie/Liter are only provided for statistical purposes.

The State of California accepts Total Radium analysis in lieu of Radium 226 analysis when the value obtained from the Total Radium analysis is less than 3 p Ci/liter.

If there are questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL

Charles Green

CG:cem

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

March 1, 1989
Lab. No. 14306

Bermite Division of Whittaker
22116 West Soledad Canyon Rd.
Saugus, CA 91350

Attn: Glen Abdun Nur

RE: WATER ANALYSIS

Presenting results of analysis performed on your water sample received January 24, 1989. The sample has been described, as received, along with the data.

DATA

MW2/E/2, Sampled by Chris Thompson, 1/24/89, 1620

	pC/Liter
Gross Alpha	4 ± 3
Gross Beta	4 ± 4
Total Radium	*1.0 ± 1.0

* = less than

The State of California accepts Total Radium analysis in lieu of Radium 226 analysis when the value obtained from the Total Radium analysis is less than 3 p Ci/liter.

If there are questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL

Charles Green

CG:cem

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

March 1, 1989
Lab. No. 14337

Bermite Division of Whittaker
22116 West Soledad Canyon Rd.
Saugus, CA 91350

Attn: Glen Abdun Nur

RE: WATER ANALYSIS

Presenting results of analysis performed on your water sample received January 25, 1989. The sample has been described, as received, along with the data.

DATA

MW3/E/2, Sampled by Chris Thompson, 1/25/89, 0805

	pC/Liter
Gross Alpha	2 ± 2
Gross Beta	2 ± 2
Total Radium	*1.0 ± 1.0

* = less than

The State of California accepts Total Radium analysis in lieu of Radium 226 analysis when the value obtained from the Total Radium analysis is less than 3 p Ci/liter.

If there are questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL

Charles Green

CG:cem

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: Listed Below

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

	Constituents				
		mg/L		ug/L	
Sample Description	Sulfate	Sodium	Nitrate	Manganese	Iron
MW1/H/2	22	43	3	*30	*100
MW2/H/2	17	82	2	*30	*100
MW3/H/2	74	53	2	*30	*100
MW4/H/2	43	63	1	*30	*100

* = Less than
ug/L = ppb

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: Listed Below

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - TOTAL PHOSPHATE

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Lab Number -	14340	14309	14341	14342
Date Sampled -	1/25/89	1/24/89	1/25/89	1/25/89
Sample Description -	MW1/I/2	MW2/I/2	MW3/I/2	MW4/I/2
Phosphate-P, mg/L	*0.1	*0.1	*0.1	*0.1

* = Less than
ug/L = ppb

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: Listed Below

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

RE: WATER ANALYSES - FLUORIDE

Presented below are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

DATA

Lab Number -	14333	14314	14334	14335
Date Sampled -	1/25/89	1/24/89	1/25/89	1/25/89
Sample Description -	MW1/N/2	MW2/N/2	MW3/N/2	MW4/N/2
Fluoride mg/L	0.3	0.2	0.3	0.3

* = Less than

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG/mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14225

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW1/G/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Results ug/l
2,4,6-Trichlorophenol	*10
2,4-Dichlorophenol	*10
2,4-Dimethylphenol	*10
2,4-Dinitrophenol	*25
2-Nitrophenol	*10
2-Chlorophenol	*10
2-Methyl-4,6-dinitrophenol	*50
4-Chloro-3-methylphenol	*10
4-Nitrophenol	*25
Pentachlorophenol	*10
Phenol	*10

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14307

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW2/G/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24, 1989
Date Received: January 24, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Results ug/l
2,4,6-Trichlorophenol	*10
2,4-Dichlorophenol	*10
2,4-Dimethylphenol	*10
2,4-Dinitrophenol	*25
2-Nitrophenol	*10
2-Chlorophenol	*10
2-Methyl-4,6-dinitrophenol	*50
4-Chloro-3-methylphenol	*10
4-Nitrophenol	*25
Pentachlorophenol	*10
Phenol	*10

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14226

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW3/G/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Results ug/l
2,4,6-Trichlorophenol	*10
2,4-Dichlorophenol	*10
2,4-Dimethylphenol	*10
2,4-Dinitrophenol	*25
2-Nitrophenol	*10
2-Chlorophenol	*10
2-Methyl-4,6-dinitrophenol	*50
4-Chloro-3-methylphenol	*10
4-Nitrophenol	*25
Pentachlorophenol	*10
Phenol	*10

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

PHENOLS ANALYSES

February 14, 1989
Lab No.: 14227

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4/G/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 9, 1989

REPORT OF ANALYSIS

Constituent	Results ug/l
2,4,6-Trichlorophenol	*10
2,4-Dichlorophenol	*10
2,4-Dimethylphenol	*10
2,4-Dinitrophenol	*25
2-Nitrophenol	*10
2-Chlorophenol	*10
2-Methyl-4,6-dinitrophenol	*50
4-Chloro-3-methylphenol	*10
4-Nitrophenol	*25
Pentachlorophenol	*10
Phenol	*10

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P89-01-410

Received: 27 JAN 89
Reported: 10 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-410-1	MW4/G/2 14227	25 JAN 89
01-410-2	MW2/G/2 14307	24 JAN 89
01-410-3	MW1/G/2 14225	25 JAN 89
01-410-4	Field Blank 14225-1	25 JAN 89
01-410-5	MW3/G/2 14226	25 JAN 89

PARAMETER	01-410-1	01-410-2	01-410-3	01-410-4	01-410-5
EPA Method 604 - Phenols					
Date Extracted	01/31/89	01/31/89	01/31/89	01/31/89	01/31/89
Date Analyzed	02/09/89	02/09/89	02/09/89	02/09/89	02/09/89
Dilution Factor, Times 1	1	1	1	1	1
2,4,6-Trichlorophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dichlorophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dimethylphenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrophenol, ug/L	<25	<25	<25	<25	<25
2-Nitrophenol, ug/L	<10	<10	<10	<10	<10
2-Chlorophenol, ug/L	<10	<10	<10	<10	<10
2-Methyl-4,6-dinitrophenol, ug/L	<50	<50	<50	<50	<50
4-Chloro-3-methylphenol, ug/L	<10	<10	<10	<10	<10
4-Nitrophenol, ug/L	<25	<25	<25	<25	<25
Pentachlorophenol, ug/L	<10	<10	<10	<10	<10
Phenol, ug/L	<10	<10	<10	<10	<10

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

FORMALDEHYDE ANALYSES

February 14, 1989
Lab No.: 14229 - 14728

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: Monitoring Wells
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24 & 25, 1989
Date Received: January 25, 1989 Date Analyzed: Not Available

REPORT OF ANALYSIS

Sample Description	Results ug/l
MW1	*100
MW2	*100
MW3	*100
MW4	*100

ug/l = ppb

* = Less than

PLEASE NOTE: Analyses performed by Brown and Caldwell Laboratories. Original Results are Attached.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green

Charles Green, Ph.D.
Laboratory Director

CG:mlh

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-396

Received: 27 JAN 89
Reported: 02 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
01-396-1	MW4/Q/2 14230	25 JAN 89
01-396-2	MW1/Q/2 14728	25 JAN 89
01-396-3	MW2/Q/2 14317	24 JAN 89
01-396-4	MW3/Q/2 14229	25 JAN 89

PARAMETER	01-396-1	01-396-2	01-396-3	01-396-4
Formaldehyde, ug/L	<100	<100	<100	<100

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14218-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW1/0/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989

Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

MAIN OFFICE – & LABORATORY 853 CORPORATION STREET – P.O. BOX 272 SANTA PAULA, CALIFORNIA 93060-0272 (805) 525-3824 – (805) 659-0910
BRANCH OFFICE – & LABORATORY 2500 STAGECOACH ROAD STOCKTON, CALIFORNIA 95205 (209) 942-0181

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14315-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW2/0/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 24, 1989
Date Received: January 24, 1989

Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

MAIN OFFICE – & LABORATORY 853 CORPORATION STREET – P.O. BOX 272 SANTA PAULA, CALIFORNIA 93060-0272 (805) 525-3824 -- (805) 659-0910

BRANCH OFFICE – & LABORATORY 2500 STAGECOACH ROAD STOCKTON, CALIFORNIA 95205 (209) 942-0181

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14219-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW3/O/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 3, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

MAIN OFFICE – & LABORATORY 853 CORPORATION STREET – P.O. BOX 272 SANTA PAULA, CALIFORNIA 93060-0272 (805) 525-3824 – (805) 659-0910
BRANCH OFFICE – & LABORATORY 2500 STAGECOACH ROAD STOCKTON, CALIFORNIA 95205 (209) 942-0181

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

VOLATILE ORGANICS IN WATER (GC/MS)
EPA METHOD 624

February 14, 1989
Lab No. 14220-1

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Sample Description: MW4/O/2
Sampled by: Chris Thompson, Wenck
Date Sampled: January 25, 1989
Date Received: January 25, 1989 Date Analyzed: February 2, 1989

REPORT OF ANALYSIS

Compound	ug/l	Detection Limit ug/l	Compound	ug/l	Detection Limit ug/l
Acetone	ND	50.0	1,1-Dichloroethene	ND	5.0
Benzene	ND	5.0	trans-1,2-Dichloroethene	ND	5.0
Bromodichloromethane	ND	5.0	1,2-Dichloropropane	ND	5.0
Bromoform	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
Bromomethane	ND	10.0	trans-1,3-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0	Ethyl Benzene	ND	5.0
Chlorobenzene	ND	5.0	Methyl Ethyl Ketone	ND	50.0
Chloroethane	ND	10.0	Methylene Chloride	ND	5.0
Chloroform	ND	5.0	1,1,2,2-Tetrachloroethane	ND	5.0
Chloromethane	ND	10.0	Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0	Toluene	ND	5.0
1,2-Dichlorobenzene	ND	5.0	1,1,1-Trichloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0	1,1,2-Trichloroethane	ND	5.0
1,4-Dichlorobenzene	ND	5.0	Trichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0	Trichlorofluoromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	Vinyl Chloride	ND	10.0
			Xylenes	ND	5.0

ND = Not detected at or above the concentration of the detection limit.

ug/l = ppb

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

Eric Lu, Ph.D.
Environmental Chemist

CG/EL:mel

Quantitation Report File: 890216

Data: 890216.TI
02/02/89 13:38:00
Sample: LAB NO 14218-1 CLIENT ID MW1/O/Z 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

MW1

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	987	8:13	1	1.000	A BB	16297.	10.000 UG/KG	15.77
2	114	1135	9:27	2	1.000	A BB	159133.	10.000 UG/KG	15.77
3	117	1656	13:48	3	1.000	A BV	108167.	10.000 UG/KG	15.77
4	65	1068	8:54	1	1.082	A BB	23312.	9.823 UG/KG	15.49
5	100	1381	11:30	3	0.834	A BB	123889.	9.550 UG/KG	15.06
6	95	1905	15:52	3	1.150	A BB	42590.	11.182 UG/KG	17.63
7	50	586	4:53	1	0.594	A BB	136.	0.017 UG/KG	0.03
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	101	680	5:40	1	0.689	A BB	202.	0.040 UG/KG	0.06
12	NOT FOUND								
13	84	795	6:37	1	0.805	A BB	737.	0.147 UG/KG	0.23
14	96	829	6:54	1	0.840	A BB	54.	0.009 UG/KG	0.01
15	63	881	7:20	1	0.893	A BB	115.	0.010 UG/KG	0.02
16	83	997	8:18	1	1.010	A BB	244.	0.034 UG/KG	0.05
17	97	1026	8:33	2	0.904	A BB	232.	0.043 UG/KG	0.07
18	NOT FOUND								
19	78	1079	8:59	2	0.951	A BB	619.	0.026 UG/KG	0.04
20	NOT FOUND								
21	63	1212	10:06	2	1.068	A BB	55.	0.009 UG/KG	0.01
22	130	1177	9:48	2	1.037	A BB	454.	0.072 UG/KG	0.11
23	NOT FOUND								
24	75	1332	11:06	2	1.174	A BB	254.	0.058 UG/KG	0.09
25	75	1432	11:56	2	1.262	A BB	85.	0.029 UG/KG	0.05
26	92	1394	11:37	3	0.842	A BB	680.	0.046 UG/KG	0.07
27	97	1467	12:13	2	1.293	A BB	69.	0.037 UG/KG	0.06
28	NOT FOUND								
29	164	1497	12:28	3	0.904	A BB	163.	0.035 UG/KG	0.05
30	112	1661	13:50	3	1.003	A BB	336.	0.027 UG/KG	0.04
31	106	1686	14:03	3	1.018	A BB	215.	0.027 UG/KG	0.04
32	106	1711	14:15	3	1.033	A BB	388.	0.043 UG/KG	0.07
33	106	1711	14:15	3	1.033	A BB	388.	0.043 UG/KG	0.07
34	NOT FOUND								
35	NOT FOUND								
36	146	2152	17:56	3	1.300	A BB	209.	0.037 UG/KG	0.06
37	146	2172	18:06	3	1.312	A BB	375.	0.055 UG/KG	0.09
38	146	2256	18:48	3	1.362	A BB	133.	0.033 UG/KG	0.05
39	43	781	6:30	1	0.791	A BB	442.	1.052 UG/KG	1.66
40	76	767	6:23	1	0.777	A BB	529.	0.066 UG/KG	0.10
41	43	954	7:57	2	0.841	A BB	851.	0.865 UG/KG	1.36
42	104	1796	14:58	3	1.085	A BB	256.	0.023 UG/KG	0.04

Quantitation Report File: 890214

Data: 890214.TI
02/02/89 12:12:00
Sample: LAB NO 14315-1 CLIENT ID MW2/O/Z 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

MW-2

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	984	8:12	1	1.000	A BB	15150.	10.000	UG/KG	14.50
2	114	1132	9:26	2	1.000	A BB	146844.	10.000	UG/KG	14.50
3	117	1653	13:46	3	1.000	A BB	100256.	10.000	UG/KG	14.50
4	65	1065	8:52	1	1.082	A BB	23406.	10.609	UG/KG	15.38
5	100	1378	11:29	3	0.834	A BB	114897.	9.556	UG/KG	13.85
6	95	1902	15:51	3	1.151	A VB	41912.	11.872	UG/KG	17.21
7	50	586	4:53	1	0.596	A BB	378.	0.051	UG/KG	0.07
8	62	599	4:59	1	0.609	A BB	205.	0.034	UG/KG	0.05
9	94	636	5:18	1	0.646	A BB	86.	0.020	UG/KG	0.03
10	64	649	5:24	1	0.660	A BB	95.	0.019	UG/KG	0.03
11	101	679	5:39	1	0.690	A BB	309.	0.065	UG/KG	0.09
12	96	737	6:08	1	0.749	A BB	251.	0.048	UG/KG	0.07
13	84	792	6:36	1	0.805	A BB	2668.	0.572	UG/KG	0.83
14	96	825	6:52	1	0.838	A BB	272.	0.046	UG/KG	0.07
15	63	876	7:18	1	0.890	A BB	273.	0.027	UG/KG	0.04
16	83	996	8:18	1	1.012	A BB	333.	0.050	UG/KG	0.07
17	97	1022	8:31	2	0.903	A BB	314.	0.063	UG/KG	0.09
18	62	1077	8:58	1	1.095	A BB	152.	0.055	UG/KG	0.08
19	78	1076	8:58	2	0.951	A BB	3746.	0.170	UG/KG	0.25
20	117	1047	8:43	2	0.925	A BB	149.	0.035	UG/KG	0.05
21	63	1209	10:04	2	1.068	A BB	186.	0.034	UG/KG	0.05
22	130	1174	9:47	2	1.037	A BB	14784.	2.549	UG/KG	3.70
23	83	1255	10:27	2	1.109	A BB	84.	0.027	UG/KG	0.04
24	75	1330	11:05	2	1.175	A BB	291.	0.072	UG/KG	0.10
25	75	1429	11:54	2	1.262	A BB	148.	0.055	UG/KG	0.08
26	92	1390	11:35	3	0.841	A BB	1354.	0.099	UG/KG	0.14
27	97	1464	12:12	2	1.293	A BB	116.	0.068	UG/KG	0.10
28	NOT	FOUND								
29	164	1493	12:26	3	0.903	A BB	326.	0.075	UG/KG	0.11
30	112	1660	13:50	3	1.004	A BB	554.	0.048	UG/KG	0.07
31	106	1683	14:01	3	1.018	A BB	414.	0.057	UG/KG	0.08
32	106	1707	14:13	3	1.033	A BB	679.	0.080	UG/KG	0.12
33	106	1707	14:13	3	1.033	A BB	679.	0.080	UG/KG	0.12
34	NOT	FOUND								
35	NOT	FOUND								
36	146	2148	17:54	3	1.299	A BB	613.	0.118	UG/KG	0.17
37	146	2169	18:04	3	1.312	A BB	797.	0.125	UG/KG	0.18
38	146	2253	18:46	3	1.363	A BB	488.	0.130	UG/KG	0.19
39	43	778	6:29	1	0.791	A BB	438.	1.121	UG/KG	1.63
40	76	764	6:22	1	0.776	A BB	743.	0.099	UG/KG	0.14
41	43	950	7:55	2	0.839	A BB	733.	0.808	UG/KG	1.17
42	104	1793	14:56	3	1.085	A BB	396.	0.038	UG/KG	0.06

Quantitation Report File: 890225

Data: 890225.TI
02/03/89 11:01:00
Sample: LAB NO 14219-1 CLIENT ID MW3/1/O/Z 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

MW-3

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	983	8:11	1	1.000	A BB	17519.	10.000 UG/KG	16.37
2	114	1131	9:25	2	1.000	A BB	166144.	10.000 UG/KG	16.37
3	117	1655	13:47	3	1.000	A BB	100834.	10.000 UG/KG	16.37
4	65	1065	8:52	1	1.083	A BB	20292.	7.954 UG/KG	13.02
5	100	1379	11:29	3	0.833	A BB	121479.	10.045 UG/KG	16.44
6	95	1904	15:52	3	1.150	A BB	34862.	9.818 UG/KG	16.07
7	50	585	4:52	1	0.595	A BB	216.	0.025 UG/KG	0.04
8	62	598	4:59	1	0.608	A BB	149.	0.022 UG/KG	0.04
9	94	634	5:17	1	0.645	A BB	55.	0.011 UG/KG	0.02
10	64	647	5:23	1	0.658	A BB	60.	0.010 UG/KG	0.02
11	101	675	5:37	1	0.687	A BB	326.	0.060 UG/KG	0.10
12	96	735	6:07	1	0.748	A BB	200.	0.033 UG/KG	0.05
13	84	789	6:34	1	0.803	A BB	699.	0.130 UG/KG	0.21
14	96	823	6:51	1	0.837	A BB	252.	0.037 UG/KG	0.06
15	63	875	7:17	1	0.890	A BB	174.	0.015 UG/KG	0.02
16	83	993	8:16	1	1.010	A BB	255.	0.033 UG/KG	0.05
17	97	1022	8:31	2	0.904	A BB	279.	0.050 UG/KG	0.08
18	62	1075	8:57	1	1.094	A BB	86.	0.027 UG/KG	0.04
19	78	1075	8:57	2	0.950	A BB	715.	0.029 UG/KG	0.05
20	117	1047	8:43	2	0.926	A BB	166.	0.035 UG/KG	0.06
21	63	1208	10:04	2	1.068	A BB	145.	0.024 UG/KG	0.04
22	130	1174	9:47	2	1.038	A BB	432.	0.066 UG/KG	0.11
23	NOT	FOUND							
24	75	1329	11:04	2	1.175	A BB	423.	0.092 UG/KG	0.15
25	75	1429	11:54	2	1.263	A BB	310.	0.101 UG/KG	0.17
26	92	1391	11:35	3	0.840	A BB	1789.	0.130 UG/KG	0.21
27	NOT	FOUND							
28	NOT	FOUND							
29	164	1494	12:27	3	0.903	A BB	410.	0.094 UG/KG	0.15
30	112	1659	13:49	3	1.002	A BB	528.	0.045 UG/KG	0.07
31	106	1683	14:01	3	1.017	A BB	395.	0.054 UG/KG	0.09
32	106	1708	14:14	3	1.032	A BB	613.	0.072 UG/KG	0.12
33	106	1708	14:14	3	1.032	A BB	613.	0.072 UG/KG	0.12
34	NOT	FOUND							
35	NOT	FOUND							
36	146	2149	17:54	3	1.298	A BB	502.	0.096 UG/KG	0.16
37	146	2170	18:05	3	1.311	A BB	592.	0.093 UG/KG	0.15
38	146	2255	18:47	3	1.363	A BB	376.	0.099 UG/KG	0.16
39	43	776	6:28	1	0.789	A BB	472.	1.045 UG/KG	1.71
40	76	761	6:20	1	0.774	A BB	673.	0.078 UG/KG	0.13
41	43	949	7:54	2	0.839	A BB	578.	0.563 UG/KG	0.92
42	104	1795	14:57	3	1.085	A BB	334.	0.032 UG/KG	0.05

Quantitation Report File: 890219

Data: 890219.TI
02/02/89 15:11:00
Sample: LAB NO 14220-1 CLIENT ID MW4/O/Z 25 ML PAT
Conds.: 35 TO 180 @ 8/MIN
Formula: (624/8240) Instrument: 5100 Weight: 0.000
Submitted by: BERMITE Analyst: EL Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	BROMOCHLOROMETHANE **IS1**
2	1,4-DIFLUOROBENZENE **IS2**
3	CHLOROBENZENE-D5 **IS3**
4	1,2-DICHLOROETHANE-D4 **SU1**
5	TOLUENE-D8 **SU2**
6	4-BROMOFLUOROBENZENE **SU3**
7	CHLOROMETHANE
8	VINYL CHLORIDE
9	BROMOMETHANE
10	CHLOROETHANE
11	TRICHLOROFLUOROMETHANE
12	1,1-DICHLOROETHENE
13	METHYLENE CHLORIDE
14	TRANS-1,2-DICHLOROETHENE
15	1,1-DICHLOROETHANE
16	CHLOROFORM
17	1,1,1-TRICHLOROETHANE
18	1,2-DICHLOROETHANE
19	BENZENE
20	CARBON TETRACHLORIDE
21	1,2-DICHLOROPROPANE
22	TRICHLOROETHENE
23	BROMODICHLOROMETHANE
24	TRANS-1,3-DICHLOROPROPENE
25	CIS-1,3-DICHLOROPROPENE
26	TOLUENE
27	1,1,2-TRICHLOROETHANE
28	DIBROMOCHLOROMETHANE
29	TETRACHLOROETHENE
30	CHLOROBENZENE
31	ETHYLBENZENE
32	XYLENE
33	XYLENE
34	BROMOFORM
35	1,1,2,2-TETRACHLOROETHANE
36	1,3-DICHLOROBENZENE
37	1,4-DICHLOROBENZENE
38	1,2-DICHLOROBENZENE
39	ACETONE
40	CARBON DISULFIDE
41	METHYL ETHYL KETONE
42	STYRENE

MW-4

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	985	8:12	1	1.000	A BB	17013.	10.000	UG/KG	15.93
2	114	1134	9:27	2	1.000	A BB	168976.	10.000	UG/KG	15.93
3	117	1656	13:48	3	1.000	A BB	106660.	10.000	UG/KG	15.93
4	65	1067	8:53	1	1.083	A BB	21824.	8.809	UG/KG	14.03
5	100	1381	11:30	3	0.834	A BB	127678.	9.981	UG/KG	15.90
6	95	1905	15:52	3	1.150	A BB	39642.	10.555	UG/KG	16.81
7	50	586	4:53	1	0.595	A VB	200.	0.024	UG/KG	0.04
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	101	679	5:39	1	0.689	A BB	307.	0.058	UG/KG	0.09
12	96	737	6:08	1	0.748	A BB	163.	0.027	UG/KG	0.04
13	84	793	6:36	1	0.805	A BB	431.	0.082	UG/KG	0.13
14	96	826	6:53	1	0.839	A BB	155.	0.023	UG/KG	0.04
15	NOT FOUND									
16	83	997	8:18	1	1.012	A BB	294.	0.039	UG/KG	0.06
17	97	1025	8:32	2	0.904	A BB	325.	0.057	UG/KG	0.09
18	NOT FOUND									
19	78	1079	8:59	2	0.951	A BB	595.	0.023	UG/KG	0.04
20	117	1050	8:45	2	0.926	A BB	119.	0.025	UG/KG	0.04
21	NOT FOUND									
22	130	1177	9:48	2	1.038	A BB	4016.	0.602	UG/KG	0.96
23	NOT FOUND									
24	75	1331	11:05	2	1.174	A BB	156.	0.033	UG/KG	0.05
25	NOT FOUND									
26	92	1393	11:36	3	0.841	A BB	862.	0.059	UG/KG	0.09
27	NOT FOUND									
28	NOT FOUND									
29	164	1496	12:28	3	0.903	A BB	400.	0.087	UG/KG	0.14
30	112	1661	13:50	3	1.003	A BB	455.	0.037	UG/KG	0.06
31	106	1686	14:03	3	1.018	A BB	335.	0.043	UG/KG	0.07
32	106	1710	14:15	3	1.033	A BB	625.	0.070	UG/KG	0.11
33	106	1710	14:15	3	1.033	A BB	625.	0.070	UG/KG	0.11
34	NOT FOUND									
35	NOT FOUND									
36	146	2151	17:55	3	1.299	A BB	461.	0.083	UG/KG	0.13
37	146	2171	18:05	3	1.311	A BB	575.	0.085	UG/KG	0.14
38	146	2256	18:48	3	1.362	A BB	335.	0.084	UG/KG	0.13
39	43	779	6:29	1	0.791	A BB	502.	1.145	UG/KG	1.82
40	76	764	6:22	1	0.776	A BB	523.	0.062	UG/KG	0.10
41	43	952	7:56	2	0.840	A BB	620.	0.594	UG/KG	0.95
42	104	1796	14:58	3	1.085	A BB	273.	0.025	UG/KG	0.04

FGL ENVIRONMENTAL

ANALYTICAL CHEMISTS

February 20, 1989
Lab No.: 14221 - 14316

Bermite Division of Whittaker
22116 West Soledad Canyon Road
Saugus, California 91350

Attention: Glen

Dear Glen:

Attached are the results of the analyses performed on your water samples received on January 25, 1989. The samples have been described, as received, along with the data.

Please note that the analyses was performed by Brown and Caldwell Laboratories, Inc.

If you have any questions, please call or write.

Very truly yours,
FGL ENVIRONMENTAL, INC.

Charles Green, Ph.D.
Laboratory Director

CG:mlh

MAIN OFFICE – & LABORATORY 853 CORPORATION STREET – P.O. BOX 272 SANTA PAULA, CALIFORNIA 93060-0272 (805) 525-3824 (805) 659-0910

BRANCH OFFICE – & LABORATORY 2500 STAGECOACH ROAD STOCKTON, CALIFORNIA 95205 (209) 946-0181

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-1	MW1/P/2 14221	25 JAN 89
01-409-2	Field Blank	25 JAN 89
01-409-3	MW2/P/2 14316	24 JAN 89
01-409-4	MW4/P/2 14223	25 JAN 89
01-409-5	MW3/P/2 14222	25 JAN 89

PARAMETER	01-409-1	01-409-2	01-409-3	01-409-4	01-409-5
B/N,A Ext.Pri.Poll. (EPA-625)					
Date Extracted	01/31/89	01/31/89	01/31/89	01/31/89	01/31/89
Date Analyzed	02/10/89	02/09/89	02/09/89	02/10/89	02/10/89
Dilution Factor, Times 1	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<10	<10	<10	<10	<10
1,2-Dichlorobenzene, ug/L	<10	<10	<10	<10	<10
1,2-Diphenylhydrazine, ug/L	<10	<10	<10	<10	<10
1,3-Dichlorobenzene, ug/L	<10	<10	<10	<10	<10
1,4-Dichlorobenzene, ug/L	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dichlorophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dimethylphenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrophenol, ug/L	<25	<25	<25	<25	<25
2,6-Dinitrotoluene, ug/L	<10	<10	<10	<10	<10
2-Chloronaphthalene, ug/L	<10	<10	<10	<10	<10
2-Methylnaphthalene, ug/L	<10	<10	<10	<10	<10
2-Methyl Phenol, ug/L	<10	<10	<10	<10	<10
2-Nitrophenol, ug/L	<10	<10	<10	<10	<10
2-Nitroaniline, ug/L	<50	<50	<50	<50	<50
2,4,5-Trichlorophenol, ug/L	<10	<10	<10	<10	<10
2-Chlorophenol, ug/L	<10	<10	<10	<10	<10
2-Methyl-4,6-dinitrophenol, ug/L	<50	<50	<50	<50	<50

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-1	MW1/P/2 14221	25 JAN 89
01-409-2	Field Blank	25 JAN 89
01-409-3	MW2/P/2 14316	24 JAN 89
01-409-4	MW4/P/2 14223	25 JAN 89
01-409-5	MW3/P/2 14222	25 JAN 89

PARAMETER	01-409-1	01-409-2	01-409-3	01-409-4	01-409-5
3,3'-Dichlorobenzidine, ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<50	<50	<50	<50	<50
4-Bromophenylphenylether, ug/L	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol, ug/L	<10	<10	<10	<10	<10
4-Chlorophenylphenylether, ug/L	<10	<10	<10	<10	<10
4-Chloroaniline, ug/L	<20	<20	<20	<20	<20
4-Methyl Phenol, ug/L	<10	<10	<10	<10	<10
4-Nitrophenol, ug/L	<25	<25	<25	<25	<25
4-Nitroaniline, ug/L	<50	<50	<50	<50	<50
Acenaphthene, ug/L	<10	<10	<10	<10	<10
Acenaphthylene, ug/L	<10	<10	<10	<10	<10
Aniline, ug/L	<20	<20	<20	<20	<20
Anthracene, ug/L	<10	<10	<10	<10	<10
Bis(2-ethylhexyl)phthalate, ug/L	<10	<10	<10	<10	<10
Benzidine, ug/L	<40	<40	<40	<40	<40
Benzoic Acid, ug/L	<50	<50	<50	<50	<50
Benzyl Alcohol, ug/L	<20	<20	<20	<20	<20
Bis(2-chloroethyl) Ether, ug/L	<10	<10	<10	<10	<10
Bis(2-Chloroisopropyl)ether, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<10	<10	<10	<10	<10
Benzo(a)anthracene, ug/L	<10	<10	<10	<10	<10
Benzo(a)pyrene, ug/L	<10	<10	<10	<10	<10
Benzo(b)fluoranthene, ug/L	<10	<10	<10	<10	<10

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
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LOG NO: P89-01-409

Received: 27 JAN 89
Reported: 13 FEB 89

Chris Thompson
FGL Environmental
853 Corporation, P.O. Box 272
Santa Paula,CA 93060

Project: Bermite

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
01-409-1	MW1/P/2 14221	25 JAN 89
01-409-2	Field Blank	25 JAN 89
01-409-3	MW2/P/2 14316	24 JAN 89
01-409-4	MW4/P/2 14223	25 JAN 89
01-409-5	MW3/P/2 14222	25 JAN 89

PARAMETER	01-409-1	01-409-2	01-409-3	01-409-4	01-409-5
Benzo(g,h,i)perylene, ug/L	<10	<10	<10	<10	<10
Benzo(k)fluoranthene, ug/L	<10	<10	<10	<10	<10
Butylbenzylphthalate, ug/L	<10	<10	<10	<10	<10
Chrysene, ug/L	<10	<10	<10	<10	<10
Di-n-octylphthalate, ug/L	<10	<10	<10	<10	<10
Dibenzo(a,h)anthracene, ug/L	<10	<10	<10	<10	<10
Dibutylphthalate, ug/L	<50	<50	<50	<50	<50
Diethylphthalate, ug/L	<10	<10	<10	<10	<10
Dimethylphthalate, ug/L	<25	<25	<25	<25	<25
Dibenzofuran, ug/L	<10	<10	<10	<10	<10
Fluorene, ug/L	<10	<10	<10	<10	<10
Fluoranthene, ug/L	<10	<10	<10	<10	<10
Hexachlorobenzene, ug/L	<10	<10	<10	<10	<10
Hexachlorobutadiene, ug/L	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene, ug/L	<10	<10	<10	<10	<10
Hexachloroethane, ug/L	<10	<10	<10	<10	<10
Indeno(1,2,3-c,d)Pyrene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine, ug/L	<40	<40	<40	<40	<40
N-Nitrosodimethylamine, ug/L	<80	<80	<80	<80	<80
N-Nitrosodiphenylamine, ug/L	<10	<10	<10	<10	<10
Naphthalene, ug/L	<10	<10	<10	<10	<10
Nitrobenzene, ug/L	<10	<10	<10	<10	<10

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01-409-4	MW4/P/2 14223	25 JAN 89
01-409-5	MW3/P/2 14222	25 JAN 89

PARAMETER	01-409-1	01-409-2	01-409-3	01-409-4	01-409-5
Pentachlorophenol, ug/L	<10	<10	<10	<10	<10
Phenanthrene, ug/L	<10	<10	<10	<10	<10
Phenol, ug/L	<10	<10	<10	<10	<10
Pyrene, ug/L	<10	<10	<10	<10	<10
Semi-Quantified Results **					
A C6 Alcohol, ug/L	---	20	---	---	---
Octyldecane, ug/L	---	50	---	---	---

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.